HERODOTUS

BOOK II

COMMENTARY 1-98

ÉTUDES PRÉLIMINAIRES AUX RELIGIONS ORIENTALES DANS L'EMPIRE ROMAIN

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COMMENTARY

1. τελευτήσαντος δὲ Κύρου ... Κύρου ἐὼν παῖς : Cf. Behistun Inscription (Weißbach, *RE* SB IV, 1132; Kent, *Old Persian*, pp. 119, §10, 158). *Καμβύσης* = *OP Kambūj̣ia*; Bab. *Kambuziya* (cf. Kent, op. cit., p. 178b-179a; Benveniste, *Titres et Noms Propres en Iranien Ancien*, p. 86); Aramaic כנבוזי *Knbwzy* (Posener, *La Première Domination Perse en Égypte*, p. 161); Eg. contemporary *Kmbiṭ(t)*; Year 12 of Darius *Knbwḏ*; Dem. *Kbḏ*, *Kbḏi*, *Gm3ḏ* (Posener, l.c.). Great King 530 (Accession Year)/529 (First Official Year)-522 B.C. He is mentioned as "King's Son" at the taking of Babylon in 538 (*Cyl* 26-28, 34-45; Weißbach, *Die Keilinschriften der Achämeniden*, p. 5 ff.; Pritchard, *ANET* p. 316) and when Cyrus returned to Ecbatana he left Cambyses there as his representative, though the latter chose Sippar as his administrative capital. He was appointed regent when Cyrus embarked on his campaign against the Massagetae and at that time became formally "King of Babylon". Documents signed after March 26th 530 (New Year's Day) are signed with the titulary of Cyrus and Cambyses (Dubberstein, *AJSL* 55 (1938), p. 417 ff.). When news of the death of Cyrus arrived at Babylon, probably in August, 530, he became "King of Babylon, King of Lands", though not without having to fight (Behistun, 10-13).

Bibliography : Lehmann-Haupt, *RE* X, 1812 ff.; Meyer, *GdA* III, p. 185 ff.; Gray, *CAH* IV, p. 14 ff.; Olmstead, *History of the Persian Empire*, p. 86 ff.; Ghirshman, *Iran*, p. 136 ff.; Frye, *The Heritage of Persia*, p. 85 ff.

Chronology, Poebel, *AJSL* 56 (1939), p. 121 ff.; Parker, ib., 58 (1941), p. 285 ff.; id. & Dubberstein, *Babylonian Chronology*, p. 14.

καὶ Κασσανδάνης τῆς Φαρνάσπεω : *Φ*. was an Achaemenid (H., III, 2, 2). Ctesias (*FgrH* 688, F. 13) claims that Cambyses' mother was Amytis, daughter of Astyages the Mede (cf. F. 9). Since H.'s account of Cambyses harmonizes with cuneiform sources, we must conclude that H. is correct. It is, however, probable that Cyrus took a daughter of Astyages as one of his wives (Lehmann-Haupt, op. cit., 1812). The tradition that C. was the son of Nitetis (III, 2) was an Eg. device to save face paralleled by the legend of the Eg. birth of Alexander the Great (Bevan, *The House of Ptolemy*, p. 3).

ταύτης δὴ τῆς γυναικὸς ... τῶν ἐπεκράτεε : The invasion had been impending since the reign of Cyrus (H., I, 153, 4) and had been caused by the foreign policy of Amasis, the major principle of which had been to prevent or check the rise of great powers in Asia which might threaten Egypt's security. His fear of Persia (III, 1) led him to conclude an alliance with Croesus of Lydia between 555-546 B.C. which involved also Babylon and Sparta (I, 77). The speed of Cyrus and precipitate action on the part of Croesus led to the defeat of Lydia (546 B.C.), splitting the alliance in two. After this Cyrus turned E. and occupied Babylon in 538, thus leaving Egypt as the only Asiatic ally in the field. An invasion of Egypt was only a matter of time. Amasis manoeuvred desperately to win allies in Greece, concluding alliances with Polycrates c. 530 (III, 39) and Cyrene (II, 181) and showering Gk. shrines with gifts (II, 180-182; III, 47) in an access of "Philhellenism" which left an indelible impression on the minds of later ages. He died in 526 leaving his son to reap the consequences.

Bibliography : Radet, *La Lydie et le Monde Grec*, p. 206 ff.; Weißbach, *RE* SB V, 455 ff.; Bilabel, *Neue Heidelberger Jahrbücher*, N.R,, 1934, p. 152 ff.; de Meulenaere, *Herodotos over de 26ste Dynastie*, p. 111 ff.; Kienitz, *Die politische Geschichte Ägyptens*, p. 31 ff.; Meyer, *GdA* III, p. 180 ff.; Gray, *CAH* IV, 15 ff.; Olmstead, *History of the Persian Empire*, p. 36 ff.

The polyglot nature of the invaders is confirmed by Wadjḥorresne (Posener, op. cit., pp. 6, B. 11-12, 14, 18-19). It is also reflected in the Elephantine Aramaic Papyri of the 5th Century where Persians, Chorasmians (from the oasis of Khiva), Caspians and particularly a large number of Semites with Babylonian, Aramaic and Jewish names are mentioned (Meyer, *Der Papyrusfund von Elephantine*, p. 25; Aimé-Giron, *Textes Araméens d'Égypte*, p. 58; Posener, op. cit., p. 167, n. 6). The presence of Babylonian soldiers in the army of Cambyses is attested also by a cuneiform contract (Meißner, *ZÄS* 29 (1891), p. 123 ff.). In fact, the entire military resources of the Persian Empire were liable for service in time of war (cf. H., VII, 61 ff.—the Persian army roster of the reign of Darius and Xerxes, possibly obtained from Zopyrus (III, 160;

cf. Olmstead, op. cit., p. 237)). Of these the Medes and Persians were clearly considered the cream as is demonstrated by the pre-eminence of the Immortals (H., VII, 83) and the almost exclusive representation of Persian and Median guards at Persepolis (Schmidt, *Persepolis*, I, pl. 23-26, 54-6, 63, 65, 71, 83-4, 87, 94-97, 136-7). Even foreign contingents were generally placed under Iranian commanders, of whom the higher echelons were drawn from the best families in the land especially trained in cadet schools (X, *An* I, 9, 3 ff.; *Cyr* VIII, 1, 6). The navy certainly operated in the campaign from a base at Acre (Str., XVI, 2, 25 (C758)) but we know nothing of it.

Bibliography : Gray, *CAH* IV, p. 190 ff.; Olmstead, *History of the Persian Empire*, p. 237 ff.; Frye, *The Heritage of Persia*, p. 108 ff.

The date of the invasion can be fixed to May/June 525 B.C. in Year 2 of Psammetichus III :

Year :

1. Man. Hist. (*FgrH* 609, p. 50 ff., F. 2, 3a, 3b) gives the year as Year 5 of Cambyses i.e. 525.
2. Gk. chronography dated it Ol. 63, 3 i.e. 526-5 (D.S., I, 68, 6).

Time of Year :

(1) A demotic papyrus mentions Month 5 of Year 2 of Psammetichus III (Dem. Pap. no. 2 Straßburg ap Spiegelberg, *Die demotischen Pap. der Straßburger Bibl.*, p. 15-16, pl. 1; Gauthier, *LR* IV, 1, p. 131, n. 1). Two other papyri mention the 4th (or 3rd) Month and the 3rd of Year 2 (Spiegelberg, *Die demotischen Pap. Loeb*, no. 41, col. 70-2, pl. 24; no. 43, col. 73-5, pl. 24).

(2) Psammetichus III ruled for six months only (Introduction, p. 192).

These data taken together must mean that Psammetichus succeeded his father Amasis in the last month of 526. This time, short as it is, would count by Saite custom as Regnal Year 1 (*BAR* IV, p. 497; Gardiner, *JEA* 31 (1945), p. 17 ff.; Drioton-Vandier, *L'Égypte* 4, p. 623; de Meulenaere, *Herodotos over de 26ste Dynastie*, pp. 15, 85). He could, therefore, only have ruled slightly over 5 months in his second year and that must mean that he was deposed by the Persians in May or June 525.

Bibliography : Prašek, *Forschungen zur Geschichte des Alterthums*, I, p. 58 ff.; Meißner, *ZÄS* 29 (1891), p. 123 ff.; Lehmann-Haupt, *RE* X, 1815; Posener, *La Première Domination Perse*, p. 173 ff.; de Meulenaere, *Herodotos over de 26ste Dynastie*, p. 85.

ἐπὶ δὲ Αἴγυπτον : *Αἴγυπτος* is probably derived from *Ḥwt k3 Ptḥ*; Bab. *Ḫikuptaḫ* "House of the Spirit of Ptaḥ", one of the names of Memphis (Brugsch, *Geogr. Inschr.*, I, p. 83; Gauthier, *DG* IV, p. 137 ff.; Gardiner, *AEO* II, p. 124*; Helck-Otto, *Kleines Wörterbuch* ², p. 28). Montet (*DG* I, p. 32) criticizes this on two grounds :

(a) Words beginning with *ḥwt* give *α* e.g. *Αὔαρις*, *Ἄθριβις*.
(b) Ptaḥ is transliterated *Φθά* in Gk.

Αἴγυπτος, however, was taken over at a much earlier period than the words in question and may reflect a much earlier pronunciation both of Gk. and Eg. Furthermore, even if the 4 transcriptions were contemporaneous, we should still have to reckon with the problem of difference of dialect both Eg. and Gk. The word was first used of the Nile (*Od* III, 300; IV, 351; 355; 483; XIV, 246 ff., 275; XVII, 427) and only later of the country itself (Helck, *KP* I, 166; Pietschmann, *RE* I, 978 ff.).

2-4. The Antiquity of Egypt, a major Gk. preoccupation (Introduction, p. 175 ff.).

2. Ψαμμήτιχον : Eg. *Psmṯk* (Gauthier, *LR* IV, 1, p. 66 ff.); Ass. *Pišamilki* (*Rassam Cylinder*, II, 114). In H. always Psammetichus I (664-610 B.C.), when referring to kings, though the father of Inarus was also called by that name (H., VII, 7). The name was borne by two other monarchs of the XXVIth Dynasty, Psammetichus II (595-589), whom H. calls *Ψάμμις* (II, 159-61), and Psammetichus III (526-525), whom he calls *Ψαμμήνιτος* (III, 10, 14-15; probably *Psmṯk s3 Nt*). The etymology of the name is unknown (theories discussed de Meulenaere, *Herodotos over de 26ste Dynastie*, p. 16 ff. He accepts an Ethiopian origin but wrongly, vide Helck, *RE* XXIII, 2, 1306; Helck-Otto, *Kleines Wörterbuch*², p. 280).

ἐπειδὴ δὲ Ψαμμήτιχος ... παρὰ ταύτῃσι τῇσι γυναιξί : Cf. II, 15. The famous experiment of Psammetichus (cf. Ar., *Nu* 398 with Schol. *ad loc.*; Poll., V, 88; Claud., *In Eutr* II, 251 ff.; Suid., s.v. *βεκεσέληνε*; Hsch., s.v. *βεκός*; Hippol., *Haer* V, 7; Origenes, *Cels* IV, 36). In Just. (II, 1) and Amm. (XXII, 15, 2) the Phrygians are replaced by Scythians. The tale certainly antedated H. and probably appeared in some form in Hec. (vide infra).

The line of thought underlying the experiment is not immediately clear. Reduced to syllogism it runs as follows :

1. The oldest people will speak the oldest language.
2. x is the oldest language.
3. ∴ the speakers of x are the oldest people.

The experiment is intended to discover the missing term of the minor premise.

The experiment itself is based on two ideas common in H. and the 5th Century :

1. The theory of environmental determinism (Introduction, p. 165 ff.). It assumes that if the conditions in which the first men lived are recreated, i.e. if human beings are placed in a state of speechlessness, they will produce exactly the same language as their forbears (similarly Salmon, *LEC* 24 (1956), p. 321 ff. & Heidel, *Hecataeus and the Egyptian Priests*, p. 57 ff.).
2. The entire operation is based on a linear view of human history which often appears as hyper-diffusionism (vide Introduction, p. 150 ff.). One language was invented and all others are in some way descended from it. Without such a theory, however unconscious, the experiment would have no value.

It should further be observed that the experiment is very carefully controlled :

1. *παιδία δύο*. An impetus to communication is needed.
2. *νεογνά*. The children are totally unconditioned.
3. *ἀνθρώπων τῶν ἐπιτυχόντων*. Only with such material would the results have general validity.
4. *ἐντειλάμενος ... ἱέναι.* } The purpose here is
5. *ἐν στέγῃ δὲ ἐρήμῃ ἐπ᾽ ἑωυτῶν.* } quite obvious.

This characteristic it shares with Hippocratic Medicine (e.g. *De Aer* VIII). The oft-expressed opinion that experimental enquiry was unknown to the Gks. is quite mistaken (cf. Farrington, *Greek Science*, Index s.v. Experiments, Greek; id., *Science in Antiquity*², Index s.v. experiment, scientific).

Φρύγας : Closely related to the Thracians, the *Φ.* invaded Asia Minor from Europe in several waves during the troubled times after 1200 B.C. (Xanth., *FgrH* 765, F. 14; H., VII, 73; X., *An* I, 2, 13; Str., XIV, 5, 29 (C680-1)) and are mentioned as the *Muški* in Assyrian sources soon after (Luckenbill, *Ancient Records of Assyria & Babylonia*, I. *Historical Records of Assyria*, § 220-2). By the 8th Century they had established a strong and unified kingdom whose brilliance, associated above all with the name of Midas, left an indelible impress on Gk. tradition (cf. H., I, 14, 35, 45). It comprised the western half of the Anatolian Plateau as far as the Halys and L. Tatta, the Konya district and the area around the Upper Maeander as well as, in the period of greatest expansion, a large part of Cappadocia where their presence is proved by the occurrence of Old-Phrygian inscriptions at Tyana, Alaça Hüyük and Pazarli. In the records of Sargon the Great they are mentioned in the same breath as the great mountain kingdom of Urartu (op. cit., II, § 92 ff., 99 ff.).

This Phrygian kingdom was destroyed by the Cimmerians at the beginning of the 7th Century B.C. but with the Lydian conquest a flourishing culture once more appeared under the patronage of local counts, the great city of Gordium providing particularly striking evidence of this phase running from the 7th to mid-6th Century.

Bibliography : Gœtze, *Kleinasien*, p. 201 ff.; Friedrich, *RE* XX, 1, 882 ff.; Bossert, *Artemis Lexikon*, 2319 ff.; Bittel, *Grundzüge der Vor- und Frühgeschichte Kleinasiens*, Ch. II-V; id., *Istanbuler Mitteilungen* 5 (1942); Mellink (ed.), *Uitgaven van het Historisch-Archaeologisch Instituut te Istanbul* 18 (1964); id., *Anadolu Araştirmalari* 2 (1965), p. 317 ff.; Barnett, *CAH* II, Ch. XXX, fasc. 56.

διδοῖ ποιμένι τρέφειν ἐς τὰ ποίμνια ... διαπρήσσεσθαι : In Egypt goats were used both for treading in the corn (n. II, 14, 5) and for food (Hartmann, *L'Agriculture dans l'Ancienne Égypte*, p. 200; Boeßneck, *Die Haustiere in Altägypten*, p. 15; Helck-Otto, *Kleines Wörterbuch* ², p. 420) but there is no evidence of the drinking of their milk, although that of cows was regarded as a great delicacy. In fact, the milk of sheep/goats is only mentioned once and that in a medical papyrus where it forms part of a remedy for treating a malady of the anus. Probably the milk was made into cheese as in the orient today (Lefebvre, *RdE* 12 (1960), p. 59 ff.). Children were normally fed by their mothers or by a nurse, though cow-horns which may have been used as milk bottles are known (Jonckheere, *Aesculape* 1955, p. 203 ff.). The Gks. did not share the Eg. enthusiasm for milk and, when they did drink it, unlike the Egs., preferred that of sheep and goats. It was certainly administered to children (Herzog-Hauser, *RE* XV, 1569 ff.; Wießner, *Artemis Lexikon*, 1215 ff.; Moritz, *KP* III, 1293 ff.).

βεκὸς ... πυνθανόμενος ... τὸν ἄρτον : Cf. Hippon. *Κυπρίων βέκος φαγοῦσι κἀμαθουσίων πυρόν* (F. 75 (Diehl^{3})). The word occurs in the same form in Neo-Phrygian inscriptions (Friedrich, *Kleinasiatische Sprachdenkmäler*, no. 33 & 86; Haas, *WZKM* 45 (1938), p. 128 ff.; id., *Die Sprache* 7 (1961), p. 83 ff.). It probably also appears in Samothracian; for the word ΒΕΚΑ is found on a fragmentary stele (Lehmann, *Hesperia* 24 (1955), p. 100; Fraser, *Samothrace*, II, 1, no. 64) and this language shows Thraco-Phrygian affinities. It is, therefore, probable that H. is correct (Bonfante, *Hesperia* 24 (1955), p. 105 ff.; Huxley, *GRBS* 4 (1963), p. 7 ff.). The word has been etymologically linked with English "bake" (Bonfante, op. cit., p. 105; id., *Armenian Quarterly* 1 (1946), p. 88 ff.) and with Armenian *bekanem* "I break" (Marstrander, *Norsk Tidsskrift for Sprogvidenskap* 2 (1929), p. 299). *Βέκος* was interpreted by some ancient writers (Schol. Ap. Rh., IV, 262; Schol., Ar., *Nu* 398; Suid., s.v. *βεκκεσέληνε*) as an imitation of the goats' cry. It should be noted that such a linguistic *τεκμήριον* fits perfectly with the interests of 5th Century anthropology (Introduction, p. 161 ff.).

ὧδε μὲν ... ἤκουον : For priests as sources cf. Introduction, p. 89 ff.

τοῦ Ἡφαίστου : Eg. *Ptḥ*; Gk. *Φθάς* (Suid., s.v. *Φθάς*; cf. Kolta, *Die Gleichsetzung*, p. 123 ff.); the Great God of Memphis. From the earliest times (Petrie, *Tarkhan*, I, pl. III) he is always represented anthropomorphically with body in outline, skull cap, necklace and hands supporting an elaborate sceptre. His early history is unknown, the name being rare even in the *PT*, but his fortunes were clearly intimately bound up with those of the city of Memphis where, according to tradition (n. II, 99), a temple was founded in his honour by Menes. In *PT* 560-6 he is mentioned alongside Ḥorus and Rēʿ, both gods with marked political overtones. As god of the residence-city throughout most of the O.K. his fortunes soared until he could lay claim to be the highest god of all. The Memphite Theology (Sethe, *Dram. Texte*, I; Junker, *Die Götterlehre von Memphis*), in its attempt to establish Ptaḥ as the Demiurge in place of Rēʿ of Heliopolis, is a clear index of this. Through his immense prestige Ptaḥ assimilated a whole series of local deities (Kees, *RT* 37 (1915), p. 57 ff.), in particular the local earth god Tatenen (de Buck, *Oerheuvel*, p. 51) and Sokaris, god of the Memphite Necropolis, with whom he formed the composite Ptaḥ-Sokar-Osiris. As god of the city of Memphis and the families who ruled from there he was regarded as the "Unifier of the Two Lands" (Sethe, op. cit., p. 34; Kees, *Lesebuch*, p. 12) as well as "the Eternal One, Lord of Years" i.e. dispenser of Sed-Festivals (*PT* 449; Sethe, op. cit., p. 76). The Apis Bull was his soul, Nefertem and Imḥotep his sons, Astarte his daughter, Kadesh his "beloved" and Sekhmet his wife with whom he and Nefertem formed the Memphite Triad. Above all, Ptaḥ was a creator/craftsman god (vide infra), a rôle which may not have been original but possibly resulted from the great importance of Memphis as an artistic centre, the base of operations for work in the great necropolises of Saqqara and Giza and in royal and noble palaces and temples.

Bibliography : Sandmann-Holmberg, *The God Ptah*; Bonnet, *RÄRG* p. 614 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 281; Rusch, *RE* XX, 1, 930 ff.

ἐν Μέμφι : Vide n. II, 99, 4.

Ἕλληνες δὲ ... παρὰ ταύτησι τῆσι γυναιξί : One of many examples of the use of variant versions in H., reflecting a fundamental aspect of his attitude to historical research viz. his sense of obligation to report whatever information he has acquired (Introduction, p. 83 ff.; Groten, *Phoenix* 17 (1963), p. 79 ff.).

H. probably rejects the Gk. tale because it offends his concept of the basic humanity of the Eg. character (cf. n. II, 45). It is likely that this version is Hecataean :

1. H. makes it clear that the tale was known to Gks. before he wrote.

2. Hec. was certainly interested in the problem of the first men :

(a) Anaximand. had developed the theory that man had come into being when the world was covered with water and slime (*KR* p. 141 ~ *DK* 12, A30). That there was a close relationship between him and Hec. is certain (Introduction, p. 127 ff.).
(b) Hec.'s interview with the Theban priests describes his discomfiture (H., II, 143). This episode was almost certainly found in his writings. Why did Hec. mention it? The answer must be that it proved that men appeared much earlier than Gk. genealogies suggested, a fact of earth-shaking importance which only emerged from acquaintance with Egypt (Introduction, p. 175 ff.).
(c) It would be strange if a work entitled the *Γενεαλογίαι* did not discuss the question at issue. The fact that the Deucalion Legend certainly did feature in it (*FgrH* I, F. 13-16) tends to confirm this suspicion.

3. *῞Ελληνες δὲ λέγουσι ἄλλα τε μάταια πόλλα* sounds like an echo of the introduction to Hec.'s *Γενεαλογίαι* (*FgrH* I, F. 1). Such irony is typical of H.'s attitude to Hec. (Introduction, p. 127) and the appearance at the beginning of the rejected version suggests strongly that it has something to do with Hec.

4. The choice of version is dictated by the conviction of the basic humanity of the Eg. character. This was certainly a firm belief of H. (vide n. II, 45) and suggests strongly that the accepted version is H.'s.

5. The intellectual attitudes which appear in the accepted version would perhaps be a little precocious in Hec.'s time.

The probabilities are, then, that the tale of the Experiment of Psammetichus appeared in Hec. and that the rejected version reflects it (with de Meulenaere (*Herodotos over de 26ste Dynastie*, p. 47) but against Jacoby (*RE* VII, 2679)). Several difficulties remain, however :

1. The ultimate origin of the tale. The following factors are important in elucidating this problem :

(a) The hyper-diffusionist theory of cultural history, a basic pre-supposition, is a fundamentally Herodotean concept.
(b) The attempt to solve a problem by means of experiment is Ionian (vide supra).

(c) The doctrine of environmental determinism is fundamental to the working of the experiment and is Ionian (vide supra).

(d) The rôle of goat's milk does not fit the Eg. context but fits a Gk. or Phrygian very well.

(e) The word *βεκός* is identifiable in the E. Aegean, Asia Minor and Cyprus.

(f) One of the Eg. names for Egypt is *Bꜣḳt* (*Wb* I, p. 425, 18). If the tale were Eg., we should expect this fact to be used to prove the opposite of the result obtained. Perhaps even more important, the word would echo the Eg. *pꜣ ʿḳw* "bread" (*Wb* I, pp. 232, 16-22, 233, 1-2), Copt. ⲡⲟⲉⲓⲕ (Crum, *CD* p. 254, a).

(g) H. knew that the Phrygians had entered Asia Minor just before the Trojan War (vide supra).

These indications prove that the story is for the most part Ionian (a, b, c) but why should the Ionians think that the Phrygians were of great antiquity? It is only possible to speculate. When the Gks. of E. Greece began to push inland, they found the powerful Phrygian kingdom on the W. Anatolian Plateau amidst the ruins and traditions of the Hittite Empire and even earlier cultures. Phrygian civilization itself was in many respects an amalgam of Asianic and Indo-European elements (Barnett, *CAH* II, Ch. XXX, fasc. 56, p. 12 ff.) and it may well be that many Phrygians could and would say with complete justification that their ancestors had been living in the area time out of mind. The Phrygians in the strict sense may have come over the Hellespont from Europe just as the Angles came from Denmark but intermarriage would soon lead—and in the latter case, amongst other factors, did lead—to an extension of the name. Thus, the development of an Ionian tradition on the great antiquity of the Phrygians might easily arise and obtain a firm footing before genealogical and related historical studies led to the discovery of the relatively late Phrygian exodus from Europe and it may well have successfully held the field against it amongst the majority of Gks.

The arrival of E. Gks. in Egypt from the late 8th Century onwards (Introduction, p. 9 ff.) would cause the problem of the relative antiquity of this or that nation to arise frequently, doubtless with considerable bitterness on the part of the Egs. That a tradition should arise in Gk. circles that Psammetichus I, the first Eg. king of whom they had first-hand experience and a man whose practical wisdom certainly impressed them, had actually tried to solve this problem would be quite natural. Of course, the form in which we have the tradition, with its colouring of Ionian science, can hardly ante-date the 5th Century, but the existence of an earlier, cruder version is clearly stated by H. and several previous phases may well have existed. Since Hec. was interested in the problem it may well have come to H. *via* him. Be that as it may, the marked Ionic flavour of the tale together with points (d) and (f) make an Eg. origin (championed by Vogt, *Herodot in Ägypten*, p. 110 ff.; Borst, *Der Turmbau von Babel*, I, pp. 39 ff., 99 ff.) impossible. Likewise, though the assertion of antiquity may be Phrygian, the developed tale could not possibly be and de Meulenaere's "Zoveel is zeker, dat het in Phrygië thuis hoort en alleen daar tot zijn volle waarde komt" (op. cit., p. 47) is quite unacceptable. It is probably Ionic (Aly, *Volksmärchen*, p. 62 ff.), certainly Gk. (Wiedemann, *Kommentar*, p. 45).

2. Why were the Eg. priests of Memphis prepared to accept a story which gave Phrygia priority in antiquity over Egypt? Salmon suggests (*LEC* 24 (1956), p. 321 ff.) that it was because the tale discomfited Psammetichus whose pro-Hellenic policies had excited their hostility. P. had set up the experiment expecting to prove that the Egs. were the oldest people but, hoist with his own petard, was forced to yield to the claims of the upstart Phrygians! This idea has distinct possibilities. In Eg. folk-tales there is a marked tendency to treat king and gods as figures of fun (Posener, *The Legacy of Egypt* ², p. 240 ff.) and cartoons have survived showing the same spirit (cf. Brunner-Traut, *Altägyptische Tiergeschichte und Fabel*, Abb. 1 ff.). Even today the Egs. have a marked satirical streak in them. Probably we must imagine that the tale was assimilated into Eg. tradition from Gk. sources in Memphis, Naucratis or some other area where the two peoples had lived for decades in close proximity (cf. de Meulenaere, op. cit., p. 47; Introduction, p. 109 ff.). Because of its satirical possibilities it then spread throughout the country. Thus, when H. came to Egypt, it will already have become part of Eg. traditions and when he enquired of the priests at the great shrines whether they knew this tale they will have said "Yes!" No more need be implied by *ὧδε μὲν γενέσθαι τῶν ἱρέων τοῦ Ἡφαίστου τοῦ ἐν Μέμφι ἤκουον.* Such an assertion does not prove that they accepted the historical validity of the tale, though it is possible, even if undemonstrable, that

after centuries of conquest and reconquest, Eg. cultural pretensions had been somewhat attenuated and their willingness to admit other people's claims thereby increased.

3. **κατὰ μὲν δὴ ... τοσαῦτα ἔλεγον, ἤκουσα δὲ καὶ ἄλλα ἐν Μέμφι ... ἐτραπόμην** : Note that the account of the Experiment of Psammetichus H. heard only at Memphis. The matters about which he enquired at Thebes and Heliopolis (*αὐτῶν τούτων εἵνεκεν*) are only those comprehended under *καὶ ἄλλα*.

ἐς Θήβας : Eg. *W3st*, *W3st nt 'Imn*, *Nìwt 'Imn* "City of Amūn"; *Nìwt rst* "Southern City"; *Nìwt* "The City", cf. Lat. *Urbs* for Rome; Copt. ⲛⲓϯ; Ass. *Ni3i* (Ranke, *APAW* 1910, Anhang, p. 31); Heb. נֹא *Nō'*, נֹא־אָמוֹן *Nō' 'Amôn*; Gk. *Διὸς πόλις* and from Hom.'s time (*Il* IX, 381) *Θῆβαι* whose etymology is questionable—either *Ṯ3mt* Copt. ϫⲏⲙⲉ, the name of the W. district of Thebes (Gauther, *DG* VI, p. 65 ff.; Kees, *RE* VA, 2, 1556 ff.; Sethe, *Amun und die acht Urgötter*, § 103; Otto, *Topographie des theban. Gaues*, p. 11; Helck, *Artemis Lexikon*, 3037 ff.) or *t3 'Ipt**. Although the name never occurs in this form with the article, *'Ipt* is common as an abbreviation of *'Ipt rst* "Luxor" (Gardiner, *AEO* II, p. 25* ff.). We can at least be certain that the name *Θῆβαι* was applied to the city in that precise form because of its similarity to an Eg. name, cf. *3bḏw*—*Ἄβυδος*, *Tr3w*—*Τροία*.

Thebes, capital of the *W3st* Nome, 4th of U.E., extended at the height of its greatness over both banks of the Nile. To the E. of the river lay the city of the living with the huge temple complexes of Karnak and Luxor as well as the brick houses of the citizens. In Karnak there were three great centres of worship, devoted to the cult of the Theban triad Amon-rēʿ, Mut and Chonsu :

1. *'Ipt swt* "Most Choice of Seats", Karnak, the great centre of the worship of Amon-rēʿ.
2. *Bnbn*, the district occupied by the temples of Chonsu and Opet.
3. *'Išrw*, the centre of the cult of Mut at Karnak, c. $^1/_2$ km. from the great temple of Amon-rēʿ. Within these districts a whole galaxy of smaller shrines was to be found (Montet, *DG* II, p. 55 ff.).

To the W. of the Nile lay the City of the Dead or Western Thebes. Here in the valley lay the great mortuary temples of the monarchs of the

XIth Dyn. and N.K., the tombs of lesser folk and, in the valleys behind the cliffs, the sepulchres of the kings and queens who had ruled Egypt during the N.K.

The city first appears in the XIth Dyn. the members of which were natives of the area and which made it the capital of Egypt. The XIIth Dyn. continued to favour the city with building, although they transferred their seat to *'Iṯ tȝwy* at the entrance to the Fayyûm (Hayes, *CAH* I, Ch. XX, fasc. 3, p. 35). During the Second Intermediate Period it was the centre of a powerful line of dynasts who successfully maintained themselves against the Hyksos of the XVth-XVIth Dyns. and it was, in fact, the warrior kings of Thebes who were largely responsible for expelling the barbarians (Hayes, op. cit., II, Ch. II, fasc. 6, p. 25 ff.). The resulting reunification of the country under the XVIIIth Dyn. inaugurated the most brilliant period in Theban history when, with the growth of Empire, the resources of Asia and Africa all flowed into her coffers. As the religious and political centre of the country its splendour knew no bounds. The kings of the XIXth Dyn. transferred their capital to Tanis but continued to favour the city. In the XXth Dyn. the growth of the necropolis necessitated an administrative division into two districts—W. Thebes, the area W. of the Nile and E. Thebes, the residential city, both under their own mayors (v. Beckerath, *Tanis und Theben*, passim). The growing power of the priesthood of the city led to the establishment of an independent kingdom in the S. with the High Priest as Pharaoh in the XXIst Dyn. (Kees, *Herihor*; Černý, *CAH* II, Ch. XXXV, fasc. 27, p. 32 ff.). Although this was short-lived, the semi-autonomous position of the Thebaid lasted through much of Egypt's later history (Meyer, *SBAW* 1928, p. 495 ff.; Kees, *Das Priestertum*, p. 89 ff.). From the 7th Century, which saw the final shift of Egypt's centre of gravity to the Delta and the sacking of the city by the Assyrians in 667, the city sank to provincial status and, though the building of great temples continued into Ptolemaic times and beyond, the glory of Thebes was never restored so that Str. could write of it *καὶ νῦν δ’ἴχνη δείκνυται τοῦ μεγέθους αὐτῆς ἐπὶ ὀγδοήκοντα σταδίους τὸ μῆκος. ἔστι δ’ἱερὰ πλείω, καὶ τούτων δὲ τὰ πολλὰ ἠκρωτηρίασε Καμβύσης. νυνὶ δὲ κωμηδὸν συνοικεῖται, μέρος μέν τι ἐν τῇ ’Αραβίᾳ, ἐν ᾗπερ ἡ πόλις, μέρος δέ τι καὶ ἐν τῇ περαίᾳ ὅπου τὸ Μεμνόνιον* (XVII, 1, 46 (C816)).

H.’s informants at Thebes were the priests of Amon-rēʿ (Introduction, p. 90).

Bibliography : Gauthier, *DG* Index, s.v. Thebes; Gardiner, *AEO* II, p. 24* ff.; Sethe, *Amun und die acht Urgötter*, passim; Montet, *DG* II, p. 55 ff.; Blackman, *Luxor and its Temples*; *PM* I & II, passim; Otto, *Topographie des theban. Gaues*; Kees, *Ancient Egypt*, p. 252 ff.; Kees, *RE* VA, 2, 1553 ff.; Helck-Otto, *Kleines Wörterbuch*², p. 379 ff.; Helck, *Artemis Lexikon*, 3037 ff.; Drioton-Vandier, *L’Égypte*⁴, Index, s.v. Thèbes; v. Beckerath, *Tanis und Theben*; Chevrier, *ASAE* 36 (1936), pp. 77 ff., 131 ff.; Bonnet, *RÄRG* p. 791 ff.

καὶ ἐς Ἡλίου πόλιν : Eg. *’Iwnw*, *’Iwnw Rʿ*; Bab. *Āna*; Ass. *Unu*; Heb. אֹן *’Ōn*; Gk. *’Ων*; Copt. ωN. Site Kom el Hisn, c. 12 kms. N.E. of Cairo; capital of the 13th Nome of L.E. some distance from the Nile with which it was connected in antiquity by a canal. It contained the great cult centre of the sun god Rēʿ (*Ḥwt Sr* or *Ḥwt ʿꜣt*), of which the shrine of the sacred Pyramidion (*Ḥwt bnbn Urk* III, 38) formed part, as well as temples of Atūm (*Pr ’Itm*) and Ḥorus (*Pr Ḥr*).

The city, as distinct from the priesthood of Heliopolis, never seems to have enjoyed great political importance (Sethe’s postulated prehistoric union of Egypt under Heliopolis (*Urgeschichte und älteste Religion*, p. 87 ff.) lacks all foundation (Kees, *Götterglaube* ², p. 260 ff.; Vandier, *La Religion* ², p. 24 ff.; Baumgartel, *The Cultures of Prehistoric Egypt*, I, p. 3 ff.). However, even in the N.K. the temple of Rēʿ still ranked above that of Ptaḥ of Memphis in the endowments listed in the Great Harris Papyrus (Erichsen, *P. Harris* I, passim). There was little building after the Saite Period (Ricke, *ZÄS* 71 (1935), p. 123 ff.). By H.’s time the city was in decline and, when Str. visited the city, it was almost entirely deserted (XVII, 1, 27 (C805)).

Bibliography : Pieper, *RE* VIII, 1, 49 ff.; Gauthier, *DG* Index, s.v. Héliopolis; Ricke, *ZÄS* 71 (1935), p. 107 ff.; Gardiner, *AEO* II, 144* ff.; *PM* IV, p. 59 ff.; Bonnet, *RÄRG* p. 543 ff.; Kees, *Ancient Egypt*, p. 147 ff.; Montet, *DG* I, p. 156 ff.

Rēʿ (*Rʿ* “Sun”; Gk. *Ἥλιος* is an exact rendering), who is always represented anthropomorphically, was probably not original to Heliopolis but, once established, assimilated the *Urgötter* Atūm and Chepre and the sky god Ḥarakhti. He may thus appear as Rēʿ-Atūm-Chepre, Rēʿ-Ḥarakhti (thus always represented as hawk-headed) or Rēʿ-Atūm-

Chepre-Ḥarakhte. At Heliopolis his nature was complex but comprehensible :

1. *Urgott*. This aspect was probably derived from Atūm who is mentioned in this capacity in the *PT* (1587, 1652; cf. Scharff. *Äg. Sonnenlieder*, p. 43). Rēʿ was the first god to emerge from the primeval ocean of Nūn, an operation pictured in a variety of ways e.g. he may emerge perched on a lotus flower (Erman, *Die Religion*, p. 62, fig. 41; Scharff, op. cit., p. 6, Abb. 2) or on a hill (de Buck, *Oerheuvel*, passim; Bonnet, *RÄRG* p. 847 ff.).

2. Creator God. A natural development of the above, probably again derived from Atūm but ably promoted by the natural connotations of the sun itself. In this capacity Rēʿ created all things from himself and is figured as father and head of the Heliopolitan Ennead (Bonnet, op. cit., p. 521 ff.).

3. World Ruler. Not only did Rēʿ create the ordered universe (*Mȝʿt*) but he was the maintainer thereof (Scharff, op. cit., p. 46; cf. Aton Hymn op. cit., p. 62). As such he is described as the father of *Mȝʿt* and often as feeding on *Mȝʿt* (Moret, *Le Culte Divin Journalier*, pp. 140, 1. 4-5; 142, 1. 3-4). Under his rule all was peace and order until the outbreak of the conflict of Ḥorus and Seth (*PT* 1040, 1463) and he it was who wiped out that disorder to restore unity and peace. He was thus regarded as the maintainer of earthly justice as well (Gardiner, *LES* p. 15, 6, 4-6 ~ Lefebvre, *Romans et Contes Égyptiens*, p. 147; Spiegel, *MDAI(K)* 8 (1938-9), p. 201 ff.).

4. *Reichsgott*. The appeal of Rēʿ's cult and the proximity of Heliopolis to the capital Memphis led in the O.K. to a great rise in the power of the Heliopolitan priesthood. Rēʿ begins to become important in royal names in the IVth Dyn. e.g. Khafrēʿ and in the Vth his triumph is complete. He becomes the great god of the rulers of Egypt who describe themselves as the physical sons of Rēʿ to the end of Eg. history, including Rēʿ in their personal names and building great temples in his honour. This position continued, if in attenuated form, through much of pharaonic history (Bonnet, op. cit., p. 629 ff.; Stevenson Smith, *CAH*, I, Ch. XIV, fasc. 5, p. 37 ff.). Pharaoh, as son of Rēʿ, was regarded as the agent of Rēʿ in maintaining *Mȝʿt* on earth (*PT* 265; Kees, *Totenglauben*, p. 152 ff.).

5. Mortuary associations. As god of light and giver of life Rēʿ occurs

frequently in mortuary contexts (Scharff, op. cit., p. 44; Schäfer, *ZÄS* 71 (1935), p. 15 ff.). The *PT* contain a developed concept of a solar hereafter (Vandier, *La Religion Égyptienne* ^{2}, p. 76 ff.) and prayers to him are common in the *BD* (e.g. Ch. XV). It was even argued that Osiris himself was simply a manifestation of Rēʿ (Bonnet, op. cit., p. 574).

In the Heliopolitan area itself Rēʿ attracted many local cults such as that of the *ʾIwn* pillar (Bonnet, op. cit., p. 543 ff.), the *Bnw* (vide n. II, 73), the *Bnbn* stone (op. cit., p. 100 ff.) and the Mnevis Bull (op. cit., p. 468 ff.) and in Egypt at large, through political reasons and the all-embracing nature and appeal of his attributes, he succeeded in assimilating almost every major god, a fact eloquently expressed in many syncretistic compounds such as Khnum-rēʿ, Sobk-rēʿ, Amon-rēʿ etc. (op. cit., pp. 237 ff., 629 ff.).

Bibliography : Sethe, *Urgeschichte und älteste Religion*, p. 87 ff.; Roeder, *RE* IA, 310 ff., Vandier, *La Religion Égyptienne*^{2}, Index, s.v. Rēʿ; Erman, *Die Religion der Ägypter*, Index, s.v. Re; Scharff, *Ägyptische Sonnenlieder*; Sethe, *Die altägyptischen Pyramidentexte*, VI, p. 16, s.v. Reʿ; Schäfer, *Weltgebäude der alten Ägypter*; Kees, *Totenglauben*, passim; id., *Götterglaube*^{2}, Index, s.v. Rê; Jéquier, *Les Religions Égyptiennes*; Bonnet, *RÄRG* p. 626 ff.; Morenz, *Ägyptische Religion*, Index, s.v. Re ; Kolta, *Die Gleichsetzung ägyptischer und griechischer Götter*, p. 105 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 300 ff.

οἱ γὰρ Ἡλιοπολῖται ... λογιώτατοι : *Λόγιος* in Pre-Socratic philosophy may be used of the outstanding intellects who have furthered man's progress along the road to civilization (Democritus *DK* 68, B30; cf. Lucr., V, 1105 ff.). "Es sind die wenigen überlegenen Geister, die zu allen höheren Errungenschaften der Masse voranschreiten, in der Religion so gut wie in der feineren Ausbildung der Sprache und der Regelung der individuellen Sitten und Gebräuche, die der Anfang staatlichen Lebens ist" (Reinhardt, *Hermes* 47 (1912), p. 511). It may well be, especially in view of the civilizing rôle which H. accepts of the Egs. (nn. II, 4, 50 ff.), that the word *λογιώτατοι* is here coloured by this concept (cf. Jäger, *Theology*, p. 183 ff.). It is quite likely that the *λόγιοι* in question were priests of the House of Life (Introduction, p. 113 ff.). The emphasis on the learning of the priests of Heliopolis is to some extent due to their prestige but it may well reflect the rôle of the *ỉšd*-tree which grew in the city (Pieper, *RE* VIII, 49 ff.). This was considered to be the tree of life and on its leaves, in the presence of Atūm, the goddess Seshat and the god Thoth wrote the names and years of the kings of Egypt at the time of their coronation. This event is often represented, particularly in the late N.K. (e.g. L*D* III, pl. 169; IV, pl. 17), and references are frequent (e.g. *Urk* IV, 276).

τὰ μέν νυν θεῖα ... ἐπιμνησθήσομαι : Cf. II, 65, 2; IX, 65, 2. First syntax. To what do the two *αὐτῶν*'s (*ἔξω ἢ τὰ οὐνόματα αὐτῶν μοῦνον* and *ἴσον περὶ αὐτῶν ἐπίστασθαι*) refer? Since H. is continually concerned in Book II with *τὰ οὐνόματα τῶν θεῶν* (n. II, 52) we assume that the first *αὐτῶν* is here masculine plural, referring to the *θεοί* implicit in *τὰ θεῖα*. The proximity of the second *αὐτῶν* will then surely compel us to accept that it too is masculine plural (with Stein, *Herodotos*, II, p. 6; Linforth, *UCPCPh* 7 (9) (1924), p. 276 ff., against How-Wells, *Commentary*, I, p. 157). The second problem is the meaning. The implications of *τὰ θεῖα* must be discussed in relation to *ὅσα δὲ ἀνθρωπήια πρήγματα* (4, 1). The distinction is, in fact, that between the metaphysical (*τὰ θεῖα*) and the physical worlds (*ἀνθρωπήια*). *τὰ θεῖα* does not mean "All that pertains to the gods" but simply the genealogies, myths, attributes and forms of the divine beings which belong to the trans-physical order of things, cannot be objects of enquiry (*ἱστορίη*) by *ὄψις, ἀκοή* and *γνώμη* and, hence, cannot be objects of certain knowledge. No man knows or can know more about them than any other (*νομίζων πάντας ἀνθρώπους ἴσον περὶ αὐτῶν ἐπίστασθαι*). Similarly, *τὰ ἀνθρωπήια* are not, in the most obvious sense, "All that pertains to man", but, "All that belongs to man's sphere of activity". The expression will, thus, include the cult of the gods—altars, methods of sacrifice, sacred animals, oracles and temples etc.—because these are what man does and creates on the gods' behalf. They do belong to the physical world and can be the objects of enquiry. The first category (*τὰ θεῖα*) H. intended to avoid; the second (*τὰ ἀνθρωπήια*) he feels able to discuss but he makes two exceptions to this rule.

1. Names (*ἔξω ἢ τὰ οὐνόματα αὐτῶν μοῦνον*; for precise meaning of *οὔνομα* vide n. II, 43, 2). The need for this exception is obvious. It is probable that H. would have been prepared to accept the view expressed in Pl., *Cra* 400d that even the names of the gods are unknown and that all we have is their conventional designations.

2. Extreme compulsion (*ὑπὸ τοῦ λόγου ἐξαναγκαζόμενος ἐπιμνησθήσομαι*). The most obvious example is the discussion of the genealogy of Herakles (II, 43-44; Introduction, p. 175 ff.), where the contradiction between Gk. and the Eg. *λόγοι* is so flagrant and has, in particular, such dire chronological repercussions that H. must attempt to resolve the difficulty. Furthermore, H.'s rule does not cover heroes. They were historical personages and could be discussed—and in that respect Herakles was a problem. Chronological embarrassment also explains II, 142-146.

That this interpretation is correct is proved by the following points :

1. Such a rule fits perfectly with H.'s practice in Bk. II and, in fact, throughout his history. He writes of the cult (II, 4, 2; 38-42, 46, 48, 51, 58-76, 91, 170-1), the priesthood (II, 35, 4; 36, 1; 37, 5), taboos (II, 37, 1-4; 47, 81), the origins of cults (II, 54, 57, 171, 2 ff.), hemerology (II, 82), oracles (II, 83, 155), the mortuary cult (II, 86-90) and temples (II, 99, 101, 108, 110, 112, 136-8, 141-142, 147-8, 151, 153, 155-6, 169, 175-6). He discusses *οὐνόματα* (II, 50-52) and consistently makes use of them. He shows, however, a marked disinclination to discuss *ἱροὶ λόγοι* because these belong, either wholly or mainly, to the metaphysical world which enquiry cannot reach (II, 46, 47, 48, 51, 62, 65, 81, 123, cf. I, 51, 193; III, 125; IV, 43). We thus have here the explanation of H.'s often discussed reticence. Sourdille's suggestion (*Hérodote et la Religion*, p. 8 ff.) that this habit derives in all cases from H.'s regarding all the rites in question as "mysteries" which were not to be divulged is quite untenable as a general rule, though in some cases it does operate (II, 61, 86, 132, 170, 171; cf. Mensching, *Das heilige Schweigen. Religionsgeschichtliche Versuche und Vorarbeiten*, XX, 2, p. 150 ff.).

2. The epistemological problems posed by metaphysical statements were clearly recognized in the 5th Century, cf. Protag., Introduction to *Περὶ Θεῶν*: *περὶ μὲν θεῶν οὐκ ἔχω εἰδέναι, οὔθ' ὡς εἰσὶν οὔθ' ὡς οὐκ εἰσὶν οὔθ' ὁποῖοί τινες ἰδέαν. πόλλα γὰρ τὰ κωλύοντα εἰδέναι, ἥ τ' ἀδηλότης καὶ βραχὺς ὢν ὁ βίος τοῦ ἀνθρώπου* (*DK* 80, B4). Since H. was clearly *au courant* with the ideas of his time, it is highly likely that he was aware of speculations on this problem. Note, however, that Protag. goes so far as to admit that the gods may not exist and *that* H. would never have done (cf. further Introduction, p. 157 ff.).

3. H. shows a marked preference for vague designations of the gods

such as *τὸ θεῖον, τὸ δαιμόνιον, οἱ θεοί, ὁ θεός*. This habit indicates the desire to avoid predicating anything of the divine as far as possible (further n. II, 52).

4. According to H. (II, 53), the genealogies, history, shapes, names and attributes of the gods were taught by Hom. and Hes. That he regards their information on such matters as unreliable is proved by II, 23. This attitude to epic theology was championed before H.'s time by Xenoph. (*DK* 21, B11-15, 23-26, 34-35) but it should be emphasized that Xenoph. differs from H. and Protag. in that, while he denies the truth of the traditional mythology, he is not only prepared to make positive statements on the nature of the divine but actually to give a clear description of it (*DK* 21, B23 ~ *KR* 173-175).

Bibliography ; Sourdille, *Hérodote et la Religion*, p. 1 ff.; id., *REG* 38 (1925), p. 289 ff.; Linforth, *UCPCPh* 7 (9) (1924), p. 269 ff.; ib., 9 (1) (1926), p. 1 ff.; ib., 9 (7) (1928), p. 201 ff.

4. ὅσα δὲ ἀνθρωπήια πρήγματα : Vide n. II, 3, 2.

πρώτους Αἰγυπτίους ... παραγίνεται : Here and in this whole chapter the Eg. priests are affirming the absolute temporal priority of their own culture. The Egs. were a remarkably egocentric people, an attitude found to some extent in most nations but compounded in their case by the relative isolation of the Nile Valley in antiquity. Their creation myths are concerned, in fact, with the creation of Egypt and the institutions of Egypt. When they come to consider the problem of the existence of foreign peoples their conclusions were a natural extension of this. They themselves are all the subjects of Ḥorus who, in the shape of Pharaoh, is champion on earth of the divine *Maʿat* or Order (vide Introduction, p. 96 ff.). Foreigners, however, are the ministers of Chaos. In a Ptolemaic text we are told that they are simply the followers of Seth (the Eg. equivalent of the devil) who had been driven out of Egypt after the triumph of Ḥorus (Chassinat, *Edfou*, VI, pp. 108 ff., 133 ff.). Hence, not only would an Eg., particularly an Eg. priest, have behind him a long tradition that life and civilization began in Egypt but he would also tend to regard foreigners as his inferiors. This latter point is strikingly illustrated by the N.K. habit of the using the word *Rmṯ* "Man" in the sense of "Egyptian", the implication being that all other inhabitants of the world were something less than human (*Wb* II, p. 423, 4; *PM* I, p. 23; Gardiner, *AEO* I, p. 100*).

It should perhaps be observed, though in the context of the Eg. *Gedankenwelt* it is of no importance, that if we take literacy as the criterion of civilization Sumer certainly has priority over Egypt and that if we consider non-literate but highly developed material cultures Anatolia has a start of millennia over Egypt e.g. Çatal Hüyük had a population of 8-10,000 people based on an agricultural economy *as early as c. 6500 B.C.* (Mellaart, *Çatal Hüyük. A Neolithic Town in Anatolia*, passim; id., *CAH* I, Ch. VII, fasc. 20, p. 8 ff.).

ἐξευρεῖν τὸν ἐνιαυτόν ... παραγίνεται : Cf. H., I, 32; D.S., I, 50; Str., XVII, 1, 29 (C806); 1, 46 (C816). The implication is that the Egs. invented the calendar and then passed it on to others (for this idea vide Introduction, pp. 49 ff., 147 ff.). H. makes four statements about the Eg. calendar :

1. The Egs. had discovered the year (Priestly information).
2. They divided it into 12 portions, i.e. months, of 30 days (Priestly information).
3. These discoveries had been made on the basis of the heavenly bodies (*ἄστρα*) (Priestly information).
4. The Egs. added 5 days at the end of every year (*ἐπάγουσι*) and thereby ensured that the calendar kept in step with the astronomical year (*καί σφι ὁ κύκλος ... παραγίνεται*) (Personal opinion-*γνώμη*).

The Eg. calendrical system is a problem of disheartening difficulty and one whose definitive solution is unlikely to be achieved without additional evidence. An attempt will, however, be made to establish a probable line of development.

A study of primitive systems of dealing with calendrical problems suggests that the following stages are likely to occur :

1. After the recognition of the day the first temporal unit identified appears always to have been the lunar or synodic month i.e. the time taken by the moon to pass through all its phases (an average of 29.5306 days). Many primitive peoples never pass beyond the stage of counting months. Indications of time take the form "Such and such a thing will happen at the next full moon" or "in three moons' time" (Nilsson, *Primitive Time Reckoning*, p. 147 ff.).

2. The next temporal unit will be the season (which is determined by the position of the earth on its path or, *aliter dictum*, the position of the sun on the ecliptic). Men may speak of the flood season, the reindeer season, the snow season, designating large temporal units by the natural phenomena connected with them.

3. The year (i.e. the time taken by the earth to pass from point x on its circuit round the sun back to the same point) will impress itself first as a fixed cycle of seasons or natural events. To the primitive agriculturalist it will be clear that there is a definite recurrent sequence of spring, summer, autumn and winter. Such a year is known as the empirical year (Nilsson, op. cit., p. 90 ff.).

4. Some primitive peoples will then observe that the stars in the heavens differ according to season. This fact results from the position of the earth on its path round the sun or, from the viewpoint of an earth-dweller, the position of the sun in the zodiac, and that in turn means that the phenomena recur annually. They will begin to relate the beginning of a season to the appearance of a particular star e.g. often the Pleiades (cf. the Aztecs—Vaillant, *Aztecs of Mexico*, p. 195). In the case of the Loanga the Heliacal Rise of Sirius (i.e. the reappearance of Sirius in the morning twilight after a prolonged period of absence) was chosen. The relation of the occurrence of a season to the reappearance of a star leads to the latter phenomenon's being regarded as the beginning of the year and we get the appearance of the stellar year which is, for practical purposes, identical with the solar year (Nilsson, op. cit., pp. 113 ff., 279 ff.; id., *Opuscula Selecta*, III, p. 547 ff.).

5. Probably the basic calendrical problem is that the lunar month and solar year are incommensurate. It should, however, be emphasized with great force that even when the astronomical year has been discovered, societies often do not find the need to solve this problem. For practical purposes the difficulty need never arise (Nilsson, op. cit., pp. 173 ff., 240 ff.; Neugebauer, *AcOr* 17 (1939), p. 179 ff.). When, however, a society does reach some degree of complexity and greater precision in fixing times becomes necessary, something must be done. The alternatives appear to be :

(1) Maintain the solar year and the lunar month. One could use 12 lunar months and ignore the days left at the end and begin a new

month at the beginning of the solar year in such systems (Nilsson, *Primitive Time Reckoning*, p. 173 ff.).

(2) Abandon the lunar month and use a schematized unit intercalating days or months as necessary. Such was the Mesopotamian system introduced by the Sumerians.

(3) Abandon a strict solar year and the lunar month in favour of a schematized system. This is the solution adopted by our Julio-Gregorian Calendar which uses a schematized year of 365 days with, every 4 years, an additional day which must be omitted every century year unless the first two figures are divisible by four (e.g. 2000 will be a leap year but 1900 was not). In this calendar a month may have anything between 28 and 31 days and bears no relation to the lunar month.

This pattern suggests that the development of the Eg. calendar will have shown, at some time,

(a) A lunar month.
(b) An empirical year.
(c) A stellar year.
(d) An attempt at schematization.

There is clear evidence of all these stages :

(a) 1. The Eg. word for month, *ꜣbd*, is written with the sign of the crescent moon (*Wb* I, p. 8, 22).
   2. The names of the days of the month reflect, where translatable, the phases of the moon (Parker, *The Calendars of Ancient Egypt*, p. 11 ff.).
   3. The lunar month is mentioned in records concerned with fixed periods of priestly service (Meyer, *Chronologie*, p. 52; Sethe, *Zeitrechnung*, p. 296 ff.; Winlock, *PAPhS* 83 (1940), p. 454; Borchardt, *Die Mittel*, pp. 5 ff., 19 ff., 36 ff.; cf. id., *Die altägyptische Zeitmessung*, p. 3 ff.; Neugebauer, *JNES* 1 (1942), p. 396 ff.).

(b) That the Egs. had at some time an empirical year is suggested by the division of their year into the 3 seasons *ꜣḫt*, *Prt* and *Šmw* which begin with the rising of the Nile and accord with its phases and the agricultural conditions based upon it (Neugebauer, *AcOr* 17 (1939), p. 179 ff.; Parker, op. cit., p. 31 ff.).

(c) That the Egyptians later employed a stellar year is certain; for the Heliacal Rise of Sirius or *Prt Spdt* (*Wb* I, p. 525, 12), which roughly coincided in antiquity with the rising of the Nile, is often mentioned as the beginning of the year (e.g. Petrie, *RT* II, pl. V, 1; VIa, 2; *PT* 965a-b; Winlock, op. cit., p. 456). In fact the Festival of the *Prt Spdt* is often described as the Festival of the Opening of the Year (*Wp Rnpt*) (Parker, op. cit., p. 30 ff.).

(d) That the Egyptians faced the problem of the incommensurate nature of the solar year and lunar month is also certain; for the Egyptian civil year consisted of

  (i) Three equal seasons *3ḫt*, *Prt* and *Šmw*.
  (ii) 12 months of *30 days*. Those months were named in official documents *3ḫt* I, II, III, IV, etc. but were also designated by the festivals which fell in them e.g. Month of the *Tḫy*-Festival (Gardiner, *ZÄS* 43 (1906), p. 136 ff.; id., *RdE* 10 (1955), p. 9 ff.).
  (iii) 5 epagomenal days (*ḥryw rnpt*). These were always added to the year at the end. The idea that in early times, the Egs. placed them at the beginning is quite mistaken (Winter, *WZKM* 56 (1960), p. 262 ff.).

The length of the year was thus 365 days which falls short, and must quickly have been realized to fall short, of the astronomical year by a period amounting, according to date, to between 0.25164 and 0.25025 days. Thus, if, at its introduction, day 1 of this schematized calendar began with the astronomical year, i.e. in Egypt with the Heliacal Rise of Sirius, in four years it will have fallen behind approximately a day and coincidences would only recur at intervals of rather over 1450 years, the exact figure varying according to date (Ingham, *JEA* 55 (1969), p. 36 ff.). During such intervals, which are known as Sothic Cycles, day 1 of the civil calendar will have fallen on every single day of the astronomical year. Hence the civil year is often known as the wandering year or *Annus Vagus*.

Fortunately we can determine when this year was introduced; for we are told by Censor. (21) that a Sothic Cycle was completed in A.D. 139. There were, therefore, coincidences in 1314 B.C., 2770 B.C., 4228 B.C.

etc., according to the figures for the Sothic Cycle given by Ingham (op. cit., p. 39). 4228 is obviously too early. By 2350 B.C. this calendar was certainly in operation (Winlock, op. cit., p. 461). It must, therefore, have been introduced in 2770 B.C.

This calendar was employed not only for administrative purposes but also for religious functions; for the Canopus Decree makes it quite clear that some of the religious festivals at least were celebrated in accordance with it (*Urk* II, 141; cf. Sethe, op. cit., p. 307 ff.; Borchardt, *Die altägyptische Zeitmessung*, p. 2 ff.; id., *Mittel*, p. 5 ff.; id., *Chronologie*, p. 3 ff.; Parker, op. cit., 51 ff.; Schott, *Festdaten*, p. 886).

D.S. (I, 50) and Str. (XVII, 1, 46 (C816)) speak of an Eg. year of $365^{1}/_{4}$ days (verbal parallels suggest a common source). This might be a reference to the abortive attempt of Ptolemy III to introduce a sixth epagomenal day every four years (*Urk* II, 140 ff.) or more likely, in view of the tone of the two passages and their probable common derivation, the malign influence of Hecataeus of Abdera or some similar enthusiast of the wisdom of the Ancient Egyptians.

What happened to the old system of lunar months and the stellar astronomical year? It continued to run alongside the civil calendar as is suggested by several factors :

1. Tables exist which must be designed to enable conversion from the old lunar calendar to the later schematic year. This was necessary in order to determine the time of astronomical festivals e.g. New Moon Festivals which could not be allowed to wander with the civil year (Schott op. cit., p. 901 ff., 925 ff.). Parker (op. cit., p, 24 ff.; *RdE* 9 (1952), p. 101 ff.) argued that there was an earlier lunar calendar and a later lunar calendar which appeared c. 2500 B.C. and that these tables refer to the latter. This does not convince. The basis is P. Carlsberg 9 (published Neugebauer-Volten, *Quellen und Studien z. Gesch. d. Mathematik. Abt.B* IV (1938) p. 383 ff.) which is a "simple scheme, based upon the civil calendar, for determining the beginning of certain lunar months over a 25 year cycle". For Parker's thesis the crucial point is the rule of intercalation which he deduced from the cycle viz. "*Whenever the first day of lunar Thoth would fall before the first day of civil Thoth, the month is intercalary*" (op. cit., p. 26, § 126). He states (l.c.) that this rule "could have been easily applied before the 25 year cycle" in P. Carlsberg was evolved. He

then, however, proceeds (p. 29, § 140) to treat this "could have been easily" as hard fact and states that the lunar calendar used in the papyrus had been dependent on the civil and must, therefore, have been introduced after it. This would, of course, mean that it was different from the lunar calendar already discussed. This is hardly compelling :

(1) The antiquity of the introduction of Parker's rule is quite unknown. It might have been invented at the same time as the 25 year cycle. There is certainly no way of telling which came first from internal evidence.
(2) The relationship of the civil and lunar calendars in this papyrus proves nothing about relative antiquity. For the compilation of a cycle such as that in P. Carlsberg the writer must have a civil calendar and a lunar calendar—and that is all. It is perfectly possible that the lunar calendar used is that outlined above (Parker's Original Lunar Calendar).
(3) The fact that Parker's scheme would give us three calendars working simultaneously (the Original Lunar Calendar, the Later Lunar Calendar and the Civil, op. cit., p. 50) does not inspire confidence.
(4) Why should the civil year be pegged to a lunar year at all? To say that the civil year "had no real being when separated from its natural counterpart" is absurd. Its "real being" consisted of 365 days, divided into 3 seasons of 4 30-day months + 5 epagomenal days. It was designed to provide convenient divisions for administrative functions. That it should have a fixed relationship to the astronomical year would be superfluous.

2. The old system continued to be used for ecclesiastical purposes (vide supra p. 24).

3. Farmers would need the old calendar.

Conclusion : The Egs. employed two calendars :

(a) A luni-solar year, the oldest scheme, based on the Heliacal Rise of Sirius (the averaged Nile Year of Neugebauer *AcOr* 7 (1939), p. 183 ff.; id., *CdE* 28 (1939), p. 258 ff.; id., *JNES* 1 (1942), p. 396 ff.; cf. Scharff, *HZ* 161 (1939), p. 3 ff., has been effectively demolished by Nilsson (*Opuscula Selecta*, III, p. 547 ff.) and Winlock (*PAPhS* 83 (1940), p. 451 ff.)) and containing normally 12 lunar months. To keep the 1st day of the 1st month in line with the astronomical year they either intercalated a 13th month (Borchardt, *Mittel*, p. 6; Schott, op. cit., p. 924; Parker, op. cit., p. 31 ff.) or simply ignored the extra days falling after the 12th, and started a new month on *Prt Spdt*. This year was retained for some religious purposes and probably for agricultural purposes as well.

(b) A schematized year was introduced in 2770 B.C. for administrative reasons to overcome the anomalies involved in close adherence to astronomical phenomena and obtain standard divisions of time (Neugebauer, *JNES* 1 (1942), p. 396 ff.; Parker, op. cit., p. 53). It consisted of 12 30-day months and 5 epagomenal days. Since this 365 day year was shorter than the luni-solar year it rotated through it at the rate of 1 day every four years. It was employed for civil and ecclesiastical purposes, the majority of festivals being dated by it. For neither purpose was the fact that it did rotate of very much importance and the Egs. were perfectly prepared to accept this rotation even if it offended the tidier minds of Ptolemaic kings. Administratively it did not matter since it was impossible to demand that taxes should be paid or work should be carried out on day *x* of month *y* and use this as a rule year in year out for decades inasmuch as fluctuations in the date and volume of the inundation would make nonsense of such instructions. Orders would have been given *annually* and consequently a civil calendar which rotated through the seasons would have no effect on administrators. As for the temples astronomically orientated festivals could still be determined by the old luni-solar calendar. If this interpretation is correct, it provides the answer to two commonly recurrent arguments :

(1) that if the Egs. had had a fixed year, they would have used it in preference to the *Annus Vagus*;

(2) that the divergence of the civil and astronomical year would quickly have become clear if the latter were ever pegged to astronomical phenomena *and quickly rectified* (Neugebauer, *AcOr* 17 (1939), p. 188; Parker, op. cit., p. 52).

H. is clearly referring to the civil calendar or *Annus Vagus*. It should, however, be emphasized that his *καί σφι ὁ κύκλος τῶν ὡρέων ἐς τὠυτὸ περιιὼν παραγίνεται* is not, in fact, true and that he was not told that by the priests (*Oratio Recta* not *Obliqua*). It is his own explanation based on the purpose of intercalation amongst the Greeks.

As for the absolute priority of the Eg. calendar, the Sumerian lunisolar calendar (for which vide Bickerman, *Chronology*, p. 22; Kaletsch, *Artemis Lexikon*, 1465) is not likely to date much later than c. 3000 B.C. (Langdon, *Babylonian Menologies and the Semitic Calendar*, p. 10). It is thus older than the Eg. civil calendar, its real counterpart.

Bibliography : Brugsch, *Thesaurus*, I-II; Meyer, *Ägyptische Chronologie*, p. 3 ff.; Gardiner, *ZÄS* 43 (1906), p. 136 ff.; Sethe, *Die Zeitrechnung der alten Ägypter, I, II. NKGWG* 1919-20; Borchardt, *Die altägyptische Zeitmessung*; Nilsson, *Primitive Time Reckoning*; id., *Opuscula Selecta*, III, p. 547 ff.; Borchardt, *Die Mittel zur zeitlichen Festlegung*, p. 5 ff.; Neugebauer, *AcOr* 17 (1939), p. 169 ff.; id., *JNES* 1 (1942), p. 396 ff.; Scharff, *HZ* 161 (1939), p. 3 ff.; Winlock, *PAPhS* 83 (1940), p. 447 ff.; Schott, *Festdaten*; Parker, *The Calendars of Ancient Egypt*; id., *RdE* 9 (1952), p. 101 ff.; Gardiner, ib., 10 (1955), p. 9 ff.; Parker, ib., 11 (1957), p. 85 ff.; Helck-Otto, *Kleines Wörterbuch*², p. 168 ff.; Winter, *WZKM* 56 (1960), p. 262 ff.; Bickerman, *Chronology of the Ancient World*, p. 40 ff.; Sontheimer, *RE* IXA, 2, 2338 ff.; Ingham, *JEA* 55 (1969), p. 36 ff.

ὅσῳ Ἕλληνες ... τῶν ὡρέων εἵνεκεν : Like the Eg. the history of the Gk. calendar is fraught with difficulties. A general trend and character is, however, clear.

In epic the year is empirical (*Od* XI, 294; Hes., *Op* 561 ff.; *Th* 58) and the month lunar (Hom., *hMerc* 11). In classical times we know of two calendars :

(a) Civil.
(b) Business.

(a) The civil calendar used a solar year of 12 months and a conventionalized lunar month system whereby *μῆνες πλήρεις* of 30 days alternated with *μῆνες κοῖλοι* of 29. The months were named after the festivals celebrated in them. Intercalation was clearly required *τῶν ὡρέων εἵνεκεν* and several systems are known :

(1) An intercalary month was added every other year (Gem., *El Astr* VIII; Censor., 18). The former speaks of this as the practice in early times and this is the method mentioned by H. It was used also both by Macedonians and Romans.
(2) The Octaeteris. This was an eight year cycle in which years 3,

5 and 8 were intercalary. This falls short of 8 astronomical years by $1^{1}/_{2}$ days (Gem., l.c.).

(3) The Nineteen-Year Cycle or Cycle of Meton proposed in 432 B.C. (lampooned by Ar., *Av* 995). This scheme included 7 intercalary months and is $^{1}/_{4}$ of a day longer than 19 astronomical years. The system was improved by Callippus (330 B.C.) and Hipparchus (c. 125 B.C.).

(b) The business calendar was a schematic year of 12 × 30-day months (Mommsen, *Chronologie*, p. 48; Sontheimer, *RE* XVI, 45ff.).

H. ignores entirely the cyclic schemes. The reason may well be that they were never taken over by a Gk. city. Certainly there is not a shred of evidence to prove that they were so used. It is scheme (a) which concerns him. The only advantage the Eg. system possesses over the Gk. is that the year is always the same length. The Gk. system does, however, make an attempt to keep the civil year in harmony with the *ὧραι*. Thus H. has recognized two things:

(a) the function and effect of the Gk. system of *ἐμβόλισμος*;
(b) the advantage of the Eg. system in having a standard year (*ἀνὰ πᾶν ἔτος* is contrasted with *διὰ τρίτου ἔτεος*).

He has, however, failed to observe that the Eg. practice of adding the epagomenal days, even if it had the same intention as *ἐμβόλισμος* in Greece, failed to have any such effect.

Bibliography : Nilsson, *Primitive Time Reckoning*, p. 362 ff.; id., *Die Entstehung und religiöse Bedeutung des griechischen Kalenders*; Bischoff, *RE* X, 1568 ff.; Pritchett, *Ancient Athenian Calendars on Stone*; Meritt, *The Athenian Year*; Sontheimer, *KP* III, 61 ff.; Kaletsch, *Artemis Lexikon*, 1465 ff.; Bickerman, *Chronology of the Ancient World*, p. 27 ff.

δυώδεκά τε θεῶν ... ἐγγλύψαι : Note that the claims made by the priests bear a close relationship to statements in the Memphite Theology where it is emphasized that Ptaḥ, after forming the gods, put them in shrines (*νηοί*), established offerings (*βωμοί*) and made their bodies (i.e. statues, *ἀγάλματα*).

δυώδεκά τε θεῶν ἐπωνυμίας ἔλεγον πρώτους Αἰγυπτίους νομίσαι : There are several problems here :

(a) *ἐπωνυμίας*. H. states elsewhere (II, 53, 2) that the *ἐπωνυμίαι* "epithets" were given to the gods by Hom. and Hes. It is the *οὐνόματα* which are derived from Egypt (II, 50 with n. ad loc.). It is probably easier to understand *ἐπωνυμίας* in our passage as *οὐνόματα* than to argue that the Egs. would be so restrained as to suggest that it was only the epithets, not the names, which they had contributed.

(b) *δυώδεκά τε θεῶν*. There are two possible interpretations :

I. The priests of Heliopolis mean the names of the Gk. Twelve Gods. Certainly the names of Hera and Poseidon are expressly stated not to have come from Egypt in II, 50, but this anomaly can be explained as an example of H.'s following the rule of II, 123, 1. In II, 4, 2 he is retailing what the *priests* say. In II, 50 ff. he is giving us *his own* opinion. One is *ἀκοή*, the other *γνώμη*.

II. The priests are using *δυώδεκα θεῶν* to cover the Heliopolitan Ennead—Rēʿ, Geb, Shu, Tefnut, Nut, Osiris, Isis, Nephthys and Seth (vide n. II, 43). Where identifiable Gk. equivalents are Helios (Rēʿ), Herakles (Shu), Dionysus (Osiris), Demeter (Isis) and Typhon (Seth). The priests will then be asserting that they have given the names of the gods in their Heliopolitan Ennead to the Gks., without implying that these names belonged to the members of the canonical list of the Twelve Gods (Linforth, *UCPCPh* 7 (9) (1924), p. 285, n. 15 approaches this view but not in these terms).

The best explanation is to assume that the priests meant II, that H. understood them to mean I, reported their tradition because of his principle of reporting *τὰ λεγόμενα* (II, 123, 1; VII, 152, 3) but had his reservations; for although he regards the Heliopolitans as reliable sources (*λογιώτατοι* II, 3, 1; *τούτων μέν ... οὕτω γενόμενα* II, 4), he was clearly not convinced of everything (*τὰ πλέω ἔργῳ ἐδήλουν*).

καὶ Ἕλληνας παρὰ σφέων ἀναλαβεῖν : Cf. Introduction, p. 49 ff.

βωμούς : In Egypt *βωμοί* are generally offering tables rather than fire altars as in Greece. The most primitive form was the mat with a loaf upon it which is depicted in the *ḥtp*-hieroglyph (Gardiner, *Egyptian Grammar* ^{3}, Sign List, R 4). It appears to have been laid over a slight elevation which has survived in some O.K. graves, sometimes made of stone but normally of mud (Reisner-Fisher, *ASAE* 13 (1914), p. 233, pl. 4; Junker, *Gîza*, I, p. 194 ff., pl. 32). Later this type was copied in stone (Rowe, *Museum Journal* 22 (1931), pl. 27, reign of Snofru; Bonnet, *RÄRG* p. 557, fig. 137). These stone offering tables are often adorned with representations in relief of offerings and equipped with a trough to channel off libations (in general vide Kamal, *CGC. Tables d'Offrandes*; Bonnet, op. cit., pp. 14 ff., 557 .; Helck-Otto, op. cit., pp. 32 ff., 260) and they can assume monumental proportions (Borchardt, *Nieuserre*, p. 68, pl. 14-15; Bisson de la Roque, *Medamoud*, p. 25; Gauthier-Jéquier, *Licht*, pl. 8; Davies, *El Amarna*, II, pl. XVIII). Large βωμοί of this type were a common feature of temple forecourts (cf. D.S., I, 48, 4).

The Eg. assertion of absolute priority in the construction of βωμοί is unjustified since they are known to have been anticipated in Mesopotamia. There are altars and offering tables in a Gawra XIX temple (c. 4200 B.C.) (Moortgat, *Die Entstehung der sumerischen Hochkultur*, p. 42; Porada, ap Ehrich, *Chronologies in Old World Archaeology*, p. 177) and in Eridu temples VIII, VII, and VI all of which antedate the El Obaid Culture (c. 4000-3500 B.C.; Childe, *New Light on the Most Ancient Near East*, p. 119; Porada, op. cit., p. 176).

As far as the Greeks are concerned, however, the priests had a strong case. Elaborate altars of squared stone were known in Minoan Crete (Evans, *Palace of Minos*, Index, s.v. Altars; Nilsson, *GgrR* I, p. 269 ff.) though small portable examples were also used as well as offering dishes (op. cit., pl. 4, 1). The Mycenaean Gks. will presumably have followed the Cretan lead but Red Fig. vases show that primitive types made of stones or lumps of earth could still be used in classical times and examples are mentioned as late as Paus. (VII, 22, 5). Doubtless, we must imagine that the altars frequently mentioned in Hom. (*Il* I, 440; VIII, 48, 238; XXIII, 148; *Od* VI, 162; XXII, 334 etc.) were of this type. There can be no question that the Egs. have priority over Aegean Peoples in constructing elaborate permanent altars.

Bibliography : Stengel, *Gr. Kultusaltertümer*, p. 11 ff.; Yavis, *Greek Altars. Origins and Typology. Saint Louis University Studies. Monograph Series : Humanities* 1 (1949); Nilsson, *GgR* I, pp. 78, 132 ff., 269 ff.

ἀγάλματα : "Statues of Gods" whether *Kultbilder* as the focal point of temple worship or images of gods in general (*LSJ* p. 5, a, s.v. ἄγαλμα, 3; Powell, *Lexikon*, p. 2,b, s.v. *ἄγαλμα* I-II). The making of *Kultbilder* (*mswt* lit. "birth" *Wb* II, p. 138, 12-15) is mentioned frequently for the Thinite Period on the Palermo Stone (Schäfer, *Bruchstück*, recto l. 2, nn. 1, 8, 9, 10; l. 3, nn. 11, 13; l. 5, n. 10; verso, l. 1, n. 2; l. 4, n. 3) and examples from this early period survive (Emery, *Archaic Egypt*, p. 170; Vandier, *Manuel III. Les Grandes Epoques. Le Statuaire*, s.v. Index, p. 552 ff.). There is no question of admitting the absolute priority of Egypt in the making of *Kultbilder*. The Neolithic city of Çatal Hüyük in Anatolia has yielded temples with cult statues *in situ* dating c. 6500 B.C. (Mellaart, *CAH* I, Ch. VII, fasc. 20, p. 11) and, therefore, considerably older than anything of the kind from Egypt.

The history of *ἀγάλματα* in Greece presents problems. In Minoan times we know of small divine images of the *Hausgöttin* and a limestone head from Mycenae *may* be that of a god (*AE* 1902, pl. 1) but there is no proof of the use of *Kultbilder*. It is probable that the cult of images only becomes important from the 7th Century. It may be that it grew out of the dedication to deities of small wooden or pottery images (*ξόανα*, for which see Paus., IX, 40, 2). Certainly in historic times almost all temples had them (Paus., IX, 25, 4; X, 33, 2) usually made of marble or bronze but in special cases chryselephantine (e.g. Zeus at Olympia and Athene at Athens). The Egs., therefore, are correct in claiming priority over the Gks. at any rate.

Bibliography : Stengel, *Gr. Kultusaltertümer*, p. 26 ff.; Reisch, *RE* I, 718 ff.; Gardner, *HERE* VII, p. 133 ff.; Bloesch, *Agalma*; Nilsson, *GgrR* I, p. 80 ff.; Berger, *Artemis Lexikon*, 62; Fauth, *KP* I, 110 ff.

νηούς : Cf. II, 63, 2. *Νηός* here = "temple". No complete divine temple survives from Egypt before the M.K. but two types of primitive naos are known from early representations :

1. The *pr nw* (*ỉtrt* of the North *Wb* I, p. 517, 5) which was built of bricks and covered with a vaulted roof.
2. The *pr wr* (*ỉtrt* of the South ib., p. 517, 2) which was a tent of some sort.

The clear distinction in origin firmly maintained by the Egs. proves that these are the pre-historic shrines of L. & U.E. respectively. Thinite monuments show them sometimes surrounded by a wall which formed a *temenos* with the shrine at the back and, often, the divine emblem in the courtyard at the front. The entrance is flanked by poles bearing streamers at the top, the prototype of the hieroglyphic sign for "god" *nṯr* (Gardiner, *Egyptian Grammar* ^{3}, Sign List, R8). The well known representations of the shrine of Neith are typical (cf. Ricke, *Bemerkungen*, I, p. 28 ff.; Vandier, op. cit., II, p. 556 ff.).

Without invoking the Halaf tholoi whose function is questionable (Moortgat, op. cit., p. 27) we can identify temples in the Mesopotamian *Kulturgebiet* from the late 5th Century B.C. (Tepe Gawra XIX and Eridu VIII-VI vide supra). By the late Uruk Period (c. 3300-3100 B.C.) the goddess Inanna had at Uruk a temple complex (the Eanna) which has no known parallel in Egypt for centuries (Lenzen, *ZfA* N.S. 15 (1950), p. 1 ff.; Schmökel, *Das Land Sumer*, p. 102 ff.).

Shrines are known in Aegean contexts from Mycenaean-Minoan times, when they may be man-made (e.g. house chapels Nilsson, *GgrR* I, p. 264; *MMR* p. 77 ff. or temples *GgrR* I pl. 7, 1, p. 273 ff.) or natural (e.g. caves in Crete id., op. cit., p. 261 ff.). The classical temple based on the *μέγαρον* principle appears in L. Geometric times (remains at Samos, Eleusis, Sparta and Perachora; models, Müller, *MDAI(A)* 48 (1923), p. 52 ff.; Payne, *Perachora*, p. 34 ff.). The Egs. are, therefore, justified in affirming the greater antiquity of their temple building *vis-à-vis* the Gks. even if they take second place to Mesopotamia.

ζῷα ... ἐγγλύψαι : *ζῷον* "figure, image" (*LSJ* p. 760, a, s.v. *ζῷον* II). Here clearly of relief work (*ἐγγλύψαι*). Relief work on pots occurs during the Amratian (Nagada I) Period (Vandier, op. cit., I, p. 274 ff., figs. 175, 177-8, 195) but stone relief sculpture is not encountered until late Pre-Dynastic. Work of superb quality appears at the end of the 4th Millennium, above all in the series of ceremonial slate palettes (e.g. the Hunter's Palette) which culminates in the famous Narmer Palette and the contemporaneous ceremonial mace heads (Vandier, op. cit., p. 573 ff.). Excellent work is also found in other materials (e.g. the Gebel el Arak Knife Handle). All this sculpture is not only antedated but clearly deeply influenced by Mesopotamia (Emery, *Archaic Egypt*, p. 165 ff.; Edwards, *CAH* I, Ch. XI, fasc. 25, p. 36 ff.). From these early and partly derivative beginnings Eg. sculptors produced a superlative corpus of work both in sunk and low relief covering the entire time span of their civilization. As for the assertion of absolute Eg. priority, the Sumerians were producing excellent relief work during the Uruk Period which probably antedates anything of the kind from Egypt (Childe, *New Light on the Most Ancient Near East*, p. 127 ff.; Frankfort, *The Art and Architecture of the Ancient Orient*, p. 9 ff.). In Greece relief sculpture in stone appears during the Mycenaean Period (e.g. the Lion Gate c. 1250 B.C., cf. Boardman, *Pre-Classical*, p. 48 ff.) but there is no doubt that Eg. work in this field is much older than any examples from the Aegean area, including Minoan seals etc. As far as H. and his contemporaries were concerned, however, there was no Gk. sculpture of any kind before the 7th Century B.C. when stimulus from the N. East, particularly Egypt, began to excite the spirit of emulation (Richter, *Greek Art*, p. 47 ff.; Boardman, op. cit., p. 95 ff.; Introduction, pp. 13 ff., 58 ff.). Again Eg. claims are valid as far as the Gk. context is concerned.

τούτων μέν νυν ... ἔλεγον : The *λόγος-ἔργον* antithesis. H. as usual is abreast of his times; for antithesis was a major characteristic of 5th Century prose style, being championed particularly by Gorg., Antiphon and Th. Within this convention the *λόγος-ἔργον* polarity occupied an honoured place (Blass, *Die attische Beredsamkeit*, I, pp. 31, 65 ff., etc.; Finley, *Thucydides*, pp. 254 ff., 276 ff.; Kennedy, *The Art of Persuasion in Greece*, Index, s.v. antithesis; Introduction, p. 149 ff.).

βασιλεῦσαι δὲ πρῶτον Αἰγύπτου ἄνθρωπον ἔλεγον Μῖνα : i.e. first after the dynasties of the gods. This is good Eg. tradition (vide Introduction, p. 186 ff.; n. II, 144). For the identity of Menes vide n. II, 99.

ἐπὶ τούτου ... ἀνὰ τὸν ποταμόν : First topography :

1. *ὁ Θηβαϊκὸς νομός*. The fact that the limit of this district is placed opposite L. Moeris proves that H. means not the Theban Nome = the 4th of U.E. but approximately the Thebaid i.e. the mod. Said (cf. II, 91; Kees, *Ancient Egypt*, p. 24). This stretched from Elephantine to Asyut (Sethe, *Urgeschichte und älteste Religion*, p. 48 ff.; Ball, *Egypt in the Classical Geographers*, p. 112 ff.). Note, however, that H. appears to fix the N. limit of the *Θηβαϊκὸς νομός* firmly at the entrance to the Fayyûm much further N. than Asyut.

2. *λίμνης τῆς Μοίριος. Μοῖρις* = Eg. *Mr wr* lit. "the Great Lake". It is applied to several things :

(1) The town of Kôm Medinet Ghurâb opposite El Lahun (Gardiner, *AEO* II, p. 115 ff*.; Montet, *DG* II, p. 214 ff.).
(2) The great lake in the Fayyûm itself (Gauthier, *DG* III, p. 50) of which the modern Birket Karûn is the remnant. In the O.K. it is called *š smʿw* "Lake of U.E." (Fraser, *ASAE* 3 (1902), p. 76), later *š* (Gauthier *DG* V, p. 112 ff.), *W3ḏ wr* "the Great Green, Sea" (Petrie, *Kahun, Gurob and Hawara*, pl. XXV; id., *Hawara, Biahmu and Arsinoe*, pl. III) and *p3 ʾImm* "the Sea" (Gardiner, *Wilbour Papyrus*, II, p. 47).
(3) *Μοῖρις* is also a name given to Amenemḥēt III (cf. II, 13, 101; Lloyd, *JEA* 56 (1970), p. 91).

H. is clearly referring to the lake but II, 149, 1 (*ἡ Μοίριος καλεομένη λίμνη*) suggests that he understands the meaning of the name *λίμνης τῆς Μοίριος* not as "L. Moeris" but "the Lake of Moeris" (cf. Gardiner, *JEA* 29 (1943), p. 37 ff.).

3. *ἐς τὴν ἀνάπλοος ἀπὸ θαλάσσης ἑπτὰ ἡμερέων ἐστὶ ἀνὰ τὸν ποταμόν.* The distance from the sea along the Rosetta Branch to Cairo = c. 259 kms = c. 162 miles. Cairo to El Lahun at the mouth of the Fayyûm along the river to Achmant and thence *via* the winding Bahr el Magnoun = c. 84 miles. This gives a total, which must be regarded as approximate, of 162 + 84 = 246 miles. Hence H. demands $^{246}/_{7}$ miles = c. 35 miles for one day's journey. Despite the protestations of some scholars this seems reasonable :

(a) II, 175, 2 gives the time for the journey Elephantine-Sais as 20 days and that figure is probably correct (vide n. ad loc.). This is a distance of c. 725 miles. Thus, a day's journey = c. 36 miles. 9 days from Heliopolis-Thebes in II, 9, 1 is certainly wrong (vide n. ad loc.).
(b) Nitocris got to Thebes from what is probably Sais in 16-17 days (Adoption Stele 7-11; Caminos, *JEA* 50 (1964), p. 74 with n. ad loc.). This distance is c. 545 miles. Therefore, the speed was c. 32 miles per day.

So much for topography. What of the source of the information itself? The tradition is obviously composite and appears to have two strands :

(a) Gk. Ionian geography was greatly interested in geomorphology, particularly the phenomenon of land extension by deltas (vide nn. II, 5-14).

(b) Eg. The Egyptians had no taste for scientific enquiry such as is implied in this section; yet H. or a predecessor was able to extract from them something which he could interpret in terms of Ionian geography. What was it? There are several possibilities :

1. Menes is connected in II, 99 with large scale dyking and canal building in the Memphite area, an idea which may well be a reflection of an old tradition of the importance of irrigation works in the development of Eg. Civilization (cf. Kees, *Ancient Egypt*, p. 24; n. II, 99, 2-3). Such a tradition may have been obtained from the Egs., elaborated by drawing out its implications and then fused with Ionian geological doctrines to form the amalgam found in II, 4, 3. This could then have been fed back into the Eg. tradition before H. reached Egypt and then rehashed in answer to his enquiries. Alternatively H. could have presented the Eg. priests with it, asked if it were true, and received the reply "Yes! it is" on the basis of its general similarities to the Eg. tradition on Menes (for this process vide Introduction, pp. 92 ff., 116).

2. The idea of the Primeval Hill rising out of the waters of Nūn was common in Ancient Egypt and occurred in most of its theological systems (de Buck, *De egyptische Voorstellingen betreffende den Oerheuvel*; Bonnet, *RÄRG* p. 847 ff.). Menes, or some later commentator, may well have expressed his achievements in mythological terms and spoken of himself as the creator of all things when the world came into being from the Nūn (Brunner, *ZDMG* 103 (1953), p. 22 ff.; Derchain, *RdE* 18 (1966), p. 31 ff.). This, on its own, or in combination with 1, could easily be fused with the Ionian ideas already discussed.

3. The Nile God of L.E. is frequently represented with a clump of papyrus on his head and bearing gifts. Such representations, which express the idea that the Nile fertilized and fructified L.E., may easily have contributed to the tradition (Gwyn Griffiths, *JNES* 25 (1966), p. 60 ff.).

Thus, the legend and mythology surrounding Menes and the iconography of the Nile God of L.E. may well have been the traditions which the priests had in mind when they agreed to H.'s questions. The peculiarly Gk. form in which H. casts it derives beyond doubt from Ionian geographical theory and this it is which explains the emphasis on the emergence of the Delta (vide n. II, 5). Whether the contamination of these two strands had already taken place when H. came it is impossible to establish. All we can say is that II, 4, 3 is H.'s ἱστορίη of the Eg. priests and the *Umdeutung* in terms of Ionian geological theory may be his but it could equally be that of Hec. or some long forgotten and unknowable Gk. enquirer.

5-35. The Physical Geography of Egypt. Several topics are discussed :

Formation of the northern part of Egypt by sedimentation (5, 10-14).
Measurements of Egypt (6-7; 9).
Physical layout (7, 2; 8).
Egypt and the theory of continents (15-18).
Hydrography (17, 19-27).

Ionian science, particularly geography, is very much in evidence here (vide Introduction, p. 156 ff.).

5. *Sedimentation.* The Ionians were firmly convinced that there had been many alterations (μεταβολαί, Xanth., *FgrH* 765, F. 13) in the surface of the earth. This conclusion was deduced from the physical peculiarities of Ionia itself :

(a) It is highly volcanic (Xanth., l.c.). Hence volcanic and seismic disturbances are often made responsible for topographical developments (Xanth., l.c.; Democles of Phygela ap Str., I, 3, 17 (C58); H. VII, 129), a device of considerable value in explaining discrepancies between contemporary and legendary topography (v. Fritz, *Die griechische Geschichtsschreibung*, I, p. 87 ff.).
(b) Fossils were abundant in Asia Minor and suggested that the area had once been under the sea (Xanth., op. cit., F. 12; n. II, 12).
(c) Sedimentation and the formation of new land in the form of Deltas were common in Asia Minor (Xanth., l.c.; n. II, 10) and were also found in the Black Sea area (e.g. L. Maeotis and the Danube Delta) which was much frequented by Ionians.

Of these factors giving rise to μεταβολαί sedimentation was a subject of particular interest whose history in early Gk. thought can be established with some confidence. Conditions in Ionia, particularly around Miletus, were such as to bring the phenomenon forcibly to the attention of the inhabitants (cf. Arist., *Mete* I, 14 (351b)) and this, together with the presence of marine fossils in inland deposits, was taken up by the philosophers, probably Thal., certainly Anaximand., Diog. Apoll. and Xenoph. as an explanation of the origins of the world so that we find widely current amongst the Ionians the doctrines that the earth came into being through the drying up of the sea (Anaximand., *DK* 12, 27 ∼ *KR* 134-5; Diog. Apoll., *DK* 64, A17 ∼ *KR* 135 with p. 439; Xenoph. who considered the process to be cyclic (*DK* 21 A33 ∼ *KR* 187)) and that man himself originated in moisture (Anaximand., *DK* 12, A30 ∼ *KR* 187). Since it was so useful in explaining discrepancies between traditional and actual topography as well as for its own curiosity value it was a subject of much interest to logographers and genealogists, among them Xanth. and Hec. Both will have contributed much to H.'s discussion. Xanth. is stated explicitly to have given H. *τὰς ἀφορμάς* (*FgrH* 765, T. 5) but, more important, H. uses his geological observations to substantiate the priestly tradition of II, 4 as Xanth. probably did (otherwise why F. 12, 13?). As for Hec., not only did he have an interest in sedimentation in general but he had also related Ionian observations on deltas and similar phenomena to the Nile Valley where a very obvious example presented itself (*FgrH* I, F. 301 with Kommentar ad loc.) and his influence is detectable on both counts (vide infra n. II, 10; Introduction, p. 130). Nevertheless, despite the influence, the wording of F. 301 and the discussion of sedimentation II, 5 ff., taken together, prove that H. has gone far beyond Hec. in his analysis of the subject as far as Egypt is concerned (vide Introduction, l.c.).

Bibliography : Berger, *Geschichte der wissenschaftlichen Erdkunde*, pp. 4, 145 ff., 150 ff.; Pearson, *Early Ionian Historians*, p. 124; Gisinger, *RE* SB IV: 565; Thomson, *History of Ancient Geography*, p. 102 ff.; Forbes, *Studies*, VII, p. 19 ff.; Gwyn Griffiths, *JNES* 25 (1966), p. 57 ff.; Brown, *AJPh* 86 (1965), p. 65 ff.; Guthrie, *History of Greek Philosophy*, p. 92 ff.; v. Fritz, *Die griechische Geschichtsschreibung*, I, p. 87 ff.

καὶ εὖ μοι ἐδόκεον ... περὶ τῆς χώρης : H. now proceeds to justify the doctrine he has obtained from the Eg. priests (II, 4, 3) in terms of Ionian geological theory. His proofs are :

1. Muddy bottom in 11 fathoms at 1 day's journey from Egypt (5).
2. Muddy and watery nature of the Delta (7).
3. Parallels in Ilium, Teuthrania, Ephesus, the Maeander plain and Acheloos (10).
4. The Delta protrudes into the sea beyond the land on either side (12).
5. Presence of fossil shells (12).
6. Presence of salt (12).
7. The mountain *ὑπὲρ Μέμφιος* is the only part of Egypt which is covered in sand (12).
8. Difference between soil of Egypt and that of surrounding lands (12):

(a) Libya is red and sandy, Egypt is black and crumbly.
(b) Arabia and Syria are clay and stony, while Egypt is not.

9. In the time of Moeris a rise of 8 cubits watered the land. In that of H. 15-16 cubits were necessary. This information, unlike the rest, derives from priestly authority (II, 13).

δῆλα γὰρ δὴ καὶ μὴ ... σύνεσιν ἔχει : Emphasis on *ὄψις*, a major source in the first part of Bk. II (Introduction, p. 84 ff.). Note furthermore the markedly polemic tone. Not only is the observation of the alluvial character of N. Egypt obvious but it is obvious to anyone with the least intelligence (*ὅστις γε ... σύνεσιν ἔχει*). Since this section clearly owes something to Hec. (vide supra), the assertion of independence acquires an added significance. "Even if Hec. had not said it, I'd have realised it. It's clear enough after all". Jacoby argues from such passages that, whenever this polemic tone appears, it indicates that H. is assailing a specifically Hecataean doctrine—an exaggerated view (vide Introduction, p. 129, n. 160).

ὅτι Αἴγυπτος ἐς τὴν Ἕλληνες ναυτίλλονται ... ἐπίκτητός τε γῆ ... τοιοῦτον : H. is drawing a distinction between two doctrines :

1. *Traditional.* We may conclude that clause 1 (*ὅτι ... τοῦ ποταμοῦ*) is the doctrine of Hec. which shared something with the view of the priests and that Hec. considered both the Delta and the area up-stream *ἐς τὴν Ἕλληνες ναυτίλλονται* to be alluvial. The statement that the Ionians regard the Delta only as Egypt (II, 15) does not disprove this idea; for

II, 15 is probably not a fair representation of the Ionian doctrine (vide n. ad loc.) and, in any case, it is far from certain that *οἱ Ἴωνες* always = Hec. (against Ehrenberg, *Klio* 16 (1920), p. 324 ff.; Pearson, *Early Ionian Historians*, p. 86 ff.; Jacoby, *FgrH* I Kommentar zu F. 301; Gwyn Griffiths, op. cit., p. 57 et al.).

2. *Personal.* This doctrine stated that the alluvial area extended even further to a distance of 4 days' sail S. of L. Moeris. Of this the priests said nothing. The wording suggests that it is H.'s own addition based on *ὄψις*.

The section contains two topographical problems :

(a) *Αἴγυπτος ἐς τὴν Ἕλληνες ναυτίλλονται.* How far is this? The expression *τὰ κατύπερθε ἔτι τῆς λίμνης* proves that the limit of Gk. navigation is L. Moeris; for *τῆς λίμνης ταύτης* has nothing else to which it can refer but *Αἴγυπτος ἐς τὴν* ... (so also Gwyn Griffiths, op. cit., p. 58). II, 13, 2 confirms. Further S. no Gk. ship could presumably go and Eg. vessels had to be employed.

(b) *καὶ τὰ κατύπερθε ... μέχρι τριῶν ἡμερέων ... ἕτερον τοιοῦτον* : H. considers the observation of Hec. to hold good also for 3 days' journey S. by river. How far is this? We can only begin with attempts to reduce 3 days to miles.

The journey from the sea to the Fayyûm was covered at the rate of c. 35 miles a day. At this speed three days would take a traveller c. 105 miles S. of the Fayyûm which, from Beni Suef, opposite the entrance to the Fayyûm 71 $^1/_2$ miles from Cairo (Baedeker, *Egypt*^{7}, p. 225), takes us to Roda (177 miles S. of Cairo, op. cit., p. 231, *ergo* 105$^1/_2$ miles from Beni Suef). No-one is likely to have travelled up-stream faster than that (Gwyn Griffiths' 50 miles per day is based on II, 9 which is certainly wrong (op. cit., p. 58) vide n. ad loc.). At the tourist speed of c. 20 miles per day which could be expected of a sailing dahabiyeh (calculated from Baedeker, op. cit., p. 204) it could apply to c. 60 miles above Beni Suef i.e. the Kolosna area. Thus, between these two points there should be something which suggested to H. an alluvial river valley. Surely this must be the Baḥr Yûsuf. Experience in Asia Minor (vide n. II, 10) would lead H. to expect in areas which he knew to be alluvial not only the main water course but the remnants of several old ones, some even still bearing water (vide n. II, 10). Could he not have thought of the Baḥr Yûsuf as such a water course and then taken it as an index of the alluvial character of the land in question? This would fit II, 15, 3 rather well. The main objection is that the channel in question begins today S. of Beni Hasan at Deirout c. 20 miles S. of Roda the point reached in journeying 3 days S. from the Fayyûm at the fast speed of 35 miles per day. Nevertheless, this should not distress us unduly. The distance in question is less than a day's journey at a 35 mile a day count and H.'s measurements, like his indications of time, should not be treated as absolutely precise. It is possible that the information derived from a native source, elicited when H. came into contact with the Baḥr Yûsuf on his visit to the Fayyûm (on which vide Introduction, p. 72 ff.). He may have enquired of someone where it started and been told, with a wave of the hand, by an Egyptian who had never left the Fayyûm at all "Oh! About 3 days' sail from here". Alternatively, a slip of the memory is possible (vide Introduction, p. 119 ff.).

Bibliography : Sourdille, *La Durée*. p. 133 ff.; Schwartz, *RA* 6 Series 37 (1951), p. 143 ff.; Gwyn Griffiths, *JNES* 25 (1966), p. 57 ff.

πρῶτα μὲν προσπλέων ... πρόχυσιν τῆς γῆς ἐοῦσαν : *τεκμήριον* 1, the first of those *οὐκ ἀμαυρὰ τεκμήρια* mentioned by Arr. (vide supra, p. 36 ff.). One day's journey by sea in H. appears to be 700 stades = c. 81 miles (H., IV, 86; Ball, *Egypt in the Classical Geographers*, p. 11), though the standard was 500 stades (A.R., I, 603; Ps. Scyl., 69 ~ *GGM* I, p. 58; Thomson, *History of Ancient Geography*, p. 46; Cary-Warmington, *Ancient Explorers*, p. 14). In fact the 11 fathom line nowhere attains even 19 miles off the coast of Egypt though discoloration of the sea by the Nile sediment is sometimes observable at up to twice that distance (Ball, op. cit., p. 13). Obviously the discrepancy is only apparent. H., or his source, may have taken a whole day to pass from the 11 fathom line to the coast because of special conditions, e.g. unfavourable offshore winds. Alternatively, it is possible that the voyage from the point of sounding to the land-fall did not cover a vertical but an oblique distance. At all events, it should be borne firmly in mind that expressions such as *ἡμέρης δρόμον ἀπέχων ἀπὸ γῆς* need never mean more than "on one particular occasion it took x one day to pass between points A and B".

6-7. τὰ μέτρα τῆς Αἰγύπτου. Here two currents in the history of Gk. geography meet :

1. The interest in determining the physical structure of the earth and its different parts (Introduction, p. 126 ff.).
2. The *περιπλοῖ* which contained information such as II, 6, 1 for purely practical purposes (Introduction, l.c.).

6. Αὐτῆς δὲ τῆς Αἰγύπτου ... τὸ παρὰ θάλασσαν ἑξήκοντα σχοῖνοι : 60 schoinoi = 60 × 60 stades = 3600 stades (II, 6, 3). The measurement from Plinthine to the E. extremity of L. Serbonis is c. 296$^{1}/_{2}$ miles (Ball, *Egypt in the Classical Geographers*, p. 13). The figure of H., which is not Hecataean (vide n. II, 15, 1), may be explained in a variety of ways :

(a) The *σχοῖνος* could vary in length considerably. Hence we hear of *σχοῖνοι* of 30, 40, 60 or 120 stades, the commonest being 30 which was almost universal in later times. In Egypt in Str.'s time the rule for conversion was 30 stades in the Delta, 120 in Middle Egypt and 60 in the Thebaid as far as Syene (for details vide n. II, 6, 3). Sethe suggests (*Dodekaschoinos*, p. 64) that H.'s authority may have meant 60 *σχοῖνοι* of 30 stades = 1800 stades. In view of our uncertainty on the length of the stade in H., this could be anything between c. 329 miles (at 1 stade = 213 m., the longest stade known, *Artemis Lexikon*, 3424) and c. 205 miles (at 1 stade = 179 m. apparently the shortest known in pre-Hellenistic times, l.c.).

(b) H.'s figures are not obtained by measurement but by calculation from the number of days taken to pass between 2 points (vide IV, 86; V, 53; Ball, op. cit., p. 11; Sourdille, *La Durée*, p. 104). Since a long day's journey by sea in H. = 700 stades (IV, 86), 3600 stades might be deduced from a journey of 5 days in very unfavourable conditions. If the ship travelled at night also at 600 stades per night (H., l.c.), the journey may have taken 3 days. In good conditions it should only have taken c. 2 days' voyaging by day only and c. 1$^{1}/_{2}$ voyaging by night and day.

κατὰ ἡμεῖς ... τὸ Κάσιον ὄρος τείνει : Assertion of independence *vis-à-vis* the Ionian view which measured Egypt from the Pelusiac to the Canopic Branch (vide n. II, 15).

τοῦ Πλινθινήτεω κόλπου : Ps. Scyl. (107 ~ *GGM* I, 82) calls it *Πλίνθινος κόλπος* = Arabs Gulf at the W. end of Maryût and extending as far W. as *Λευκὴ ἄκτη*. It was named after the coastal town of *Πλινθίνη* which lay W. of Taposiris on the strip of land between the Med. and L. Mareotis (Str., XVII, 1, 14 (C799); Ptol., *Geog* IV, 5, 8; St. Byz., s.v. *Πλινθίνη*).

Bibliography : de Cosson, *Mareotis*, Index, s.v. Plinthine; "Communiqué Service des Antiquités", *CdE* 13 (1938), p. 76; Kees, *RE* XXI, 1, 458; Ball, *Egypt in the Classical Geographers*, p. 13.

Σερβωνίδος λίμνης : Cf. III, 5; Str., I, 3, 4, (C50); XVI, 2, 32 (C760); 2, 42 (C763); XVII, 1, 35 (C809) who mentions it as the E. border of Egypt; A.R., II, 1215 with Schol. ad loc.; Plin., *HN* V, 68, in border territory; Ptol., *Geog* IV, 5; Avien., *Descr Orb* 372; St. Byz. s.v. *Σίρβων* & *Σερβωνίς*; Eust. ad D.P., 248, 262 ~ *GGM* II, pp. 260, 263. Mod. Sabkhet el-Bardawîl. Eg. possibly *š n Km wr* (Gauthier, *DG* V, p. 121).

Bibliography : v. Bissing, *Festschrift Hirschfeldt*, p. 164 ff.; Gardiner, *JEA* 6 (1920), pl. XIII; Gauthier, *DG* Index, s.v. *Σερβωνίδος λίμνη*; Kees, *RE* IIIA, 286 ff.; Ball, *Egypt in the Classical Geographers*, p. 13.

τὸ Κάσιον ὄρος : Cf. II, 158; III, 5; Str. XVI, 2, 33 (C760); Plin., *HN* V, 12, 65; Mela, I, 10; III, 8; D.P., 115 ff. ~ *GGM* II, p. 110; Eust. ad D.P., 248 ff. Katîb el-Qals on the W. edge of L. Bardawîl (Ball, op. cit., p. 13). This is a sterile sand hill, protruding into the sea near Mehemdiah. It is often mentioned in connection with the grave of Pompey (e.g. Luc., VIII, 470, 539; Str., XVI, 2, 33 (C760); Amm., XXII, 16, 3). It was sacred to Zeus Casius who had an important cult there (cf. Amm., XXII, 14, 4) which was probably Semitic in origin; for *Κάσιος* was one of the main gods of Aramaeans (Clédat, *ASAE* 10 (1910), p. 212, n. 1; Drexler, ap Roscher, *ML* I, 970 ff.).

Bibliography : Clédat, *ASAE* 10 (1910), p. 209 ff.; id., *ASAE* 16 (1916), p. 6; Gauthier, *DG* IV, p. 23; Kees, *RE* X, 2264; Ball, *Egypt in the Classical Geographers*, p. 13.

ὅσοι μὲν γὰρ ... σχοίνοισι : Great size was firmly associated in H.'s mind with all things Eg. Not only do the Egs. have great buildings but also a land so large that the biggest unit of measurement known had to be used to describe it (vide Introduction, p. 142 ff.).

δύναται δὲ ὁ μὲν παρασάγγης ... στάδια : By combining these indications with II, 149, 3 & V, 53 it is possible to work out the table of correlations between measurements in H. without difficulty :

Schoinos = 2 parasangs = 60 stades
Parasang = 30 stades
Stade = 6 plethra = 100 orguiae
Orguia = 4 cubits or 6 feet
Cubit = 6 palms
Foot = 4 palms

This scheme is, in fact, identical with the so-called Philaeteric or Ptolemaic system (Segrè, *Metrologia*, p. 5 ff.; id., *Aegyptus* 1 (1920), p. 164 ff.). It is, however, quite impossible to reduce the table to precise modern equivalents because we cannot determine these equivalents on the basis of evidence given in H. To do so we need either a definite statement of the *precise* length of one of these units by H. or a measurement which H. had certainly made with reliable means and which we could ourselves check today. Such ideal conditions are not forthcoming. The table of Ball (op. cit., p. 10 ff.) is based entirely on a measurement for the foot which is chosen quite arbitrarily from a variety of possibilities and no other attempts are any better. We know neither the length of the Herodotean foot nor that of the Herodotean cubit and can never possibly know. Furthermore, since H.'s measurements are clearly based on very imprecise techniques, it would not help us much if we did.

ὁ δὲ σχοῖνος ἕκαστος, μέτρον ἐὼν Αἰγύπτιον : *Σχοῖνος* :

1. *The Name*. *Σχοῖνος* means "rush, anything made of rushes, rush rope, rope" (*LSJ* p. 1747, a, s.v. *σχοῖνος*). The explanation of the use of the word as a unit of measurement is given by St. Jerome "... *σχοίνων*, quod aut funiculos significat aut iuxta Aegyptios mensuram certi itineris ... in Nilo enim flumine, sive in rivis eius, solent naves funibus trahere, certa habentes spatia quae appellant funiculos ut labori defessorum recentia trahentium colla succedant ... ideo funiculos transtulerant" (*Thesaurus Linguae Latinae*, VI, 1, 1593).

The *σχοῖνος* measurement was widely used in the Mediterranean and Near East in H.'s time but it was in origin Eg., the prototype being the Eg. *ỉtrw* Ptol. *ỉr*, *ꜣr* (cf. Copt. ^{s}ⲉⲓⲟⲟⲣ, ^{b}ⲓⲟⲣ, ^{f}ⲓⲁⲁⲣ; Heb. יְאֹר *y^{e}'ōr*) lit. "River Measure" (*Wb* I, p. 147, 2-4; Sethe, *Dodekaschoinos*, p. 59 ff.). This was translated into Gk. as *σχοῖνος* as the result of a complex process of misunderstanding. The Eg. word *ỉtrw* was confused in its later spellings *ỉr*, *ꜣr* with the word *ỉꜣrw* "reed" (*Wb* I, p. 32, 5-9), a process almost certainly promoted by the use of the *funiculi* mentioned by St. Jerome. When the Gks. became familiar with the measure, they would, therefore, naturally translate it as *σχοῖνος*. We may assume that the Egs. had by H.'s time come to understand its meaning a "1 rope team's worth" (Schlott, *Die Ausmaße Ägyptens*, p. 132 ff.).

2. *Length*. Since variations in conditions along the river would cause differences in the distance between the stations implied by St. Jerome, the length of a *σχοῖνος* could vary considerably (Hultsch, *Metrologie*, p. 362; Schlott, op. cit., pp. 144 ff., 156). Hence we hear of *σχοῖνοι* of 30 (Str., XVII, 1, 24 (C804); Plin., *HN* V, 63, cf. XII, 53), 40 (Plin., op. cit., XII, 53), 60 (Str., l.c.) or 120 stades (Str., l.c.), the commonest being 30 (Sethe, op. cit., p. 63). In Egypt in Str.'s time (l.c.) the rule for conversion was 30 stades in the Delta, 120 in Middle Egypt and 60 in the Thebaid as far as Syene. The generally accepted *ỉtrw* of 10.5 kms = c. $6^{1}/_{2}$ miles of Borchardt (*Nilmesser*, p. 54 n. 3; id., *Festschrift zu C.F. Lehmann-Haupts 60 Geburtstage*, p. 119 ff.) is invalid (Schlott, op. cit., p. 138 ff.) though he was correct in identifying a short *ỉtrw* of c. 5000 Eg. cubits in the Amarna Boundary Stelae. It was the 30 stade *σχοῖνος* of L.E. which spread abroad to be accepted throughout the E. Mediterranean and N.E. Thus the *σχοῖνος* is often treated as synonymous with the parasang which was also 30 stades. H. states explicitly that he is using a 60 stade measure i.e. the standard in the Thebaid (vide supra) which is described in Pap. Dem. Heidelberg 1289 (Thompson, *JEA* 11 (1925), p. 151 ff.; Sottas, *Aegyptus* 7 (1926), p. 237 ff.) as the ⟨ϣϥⲱ⟩ ⲛ̄ⲕⲏⲙⲉ i.e. *σχοῖνος Αἰγύπτιος* to distinguish it from the ϣϥⲱ or *σχοῖνος* which, though Eg. in origin, had become so widespread outside Egypt as to be regarded as a foreign measurement. Since all stade measurements in Bk. II are divisible by 60 except II, 8, 3, Schlott (op. cit., p. 154 ff.) suggests that H. got his information on these distance from Eg. sources and then converted for Gk. readers. This may be so in some cases but we cannot be sure that be-

fore H. came to Egypt the *σχοῖνος* had not been taken up by Gks. Hence some, possibly all, *σχοῖνος* measurements may be Hellenic in origin.

Bibliography : Jomard, *Exposition du Système Métrique. Description de l'Égypte*, VII; Hultsch, *Griechische und römische Metrologie*, passim; Lévy, *RT* 15 (1893), p. 162 ff.; Schwartz, *Schoinos. Berliner Studien für klassische Philologie* 15 (3) (1894); Sethe, *Dodekaschoinos*; Borchardt, *Nilmesser*, p. 54; id., *Festschrift zu C.F. Lehmann-Haupts 60 Geburtstage*, p. 119 ff.; Sourdille, *La Durée*, p. 102 ff.; Nissen, *Griechische und römische Metrologie*; Segrè, *Aegyptus* 1 (1920), p. 164 ff.; Becher, *RE* XVIII, 4, 1375; Segrè, *Metrologia*; Thompson, *JEA* 11 (1925), p. 151 ff.; Sottas, *Aegyptus* 7 (1926), p. 237 ff.; Ball, *Egypt in the Classical Geographers*, p. 10 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 218; *Artemis Lexikon*, 3421 ff.; Schlott, *Die Ausmaße Ägyptens*, passim; Jüthner, *RE* IIIA, 1930 ff,

7. **ἐνϑεῦτεν μὲν ϰαὶ μέχρι Ἡλίου πόλιος ... εὐρέα Αἴγυπτος, ἐοῦσα πᾶσα ... ϰαὶ ἰλύς :** *τεκμήριον* 2. A cursory description of the Delta.

ὑπτίη "flat, horizontal" (*LSJ* p. 1903, b, s.v. *ὕπτιος* IV). Cairo is 17 ft. above sea-level. The distance from Cairo to the point directly N. on the coast = 170 kms. = c. 106 miles. Between, the average slope of the flood plain today is 1-10,600. Nowhere in Egypt is it steeper than 1-10,000 (Ball, *Contributions*, p. 47).
ἔνυδρος καὶ ἰλύς. Cf. Ps.Scl. *ἔστι δὲ τὰ πόλλα τὰ παρὰ θαλάτταν Αἰγύπτου λίμναι καὶ ἕλη* (*GGM* I, p. 80). Nile Branches (n. II, 17, 4-6), marshes and lakes (n. II, 92), canals, the inundation itself (nn. II, 19 ff.), the high water table (n. II, 93) and the alluvial character of the soil (n. II, 10) all combined to make the Delta "watery and muddy". H. omits the turtlebacks (n. II, 97) but since his method of description is essentially impressionistic he will naturally ignore the atypical in the landscape.

ὁδῷ τῇ ἀπὸ τῶν δυώδεϰα ϑεῶν τοῦ βωμοῦ φερούσῃ : The cult of the Twelve Gods was introduced into Athens during the tyranny of the Peisistratids (Weinreich ap Roscher, *ML* VI, 772 ff., 829; Kern, *Die Religion*, I, p. 203; II, p. 93) and the famous altar in their honour was erected by Peisistratus, grandson of the Tyrant, during his Archonship (522-1 B.C.; cf. Th., VI, 54, 7) at the time of the construction of a network of roads radiating over Attica from Athens. Consequently it belongs to the same context as the *Ἱππάρχειοι Ἑρμαῖ* which stood midway between Athens and individual demes (vide n. II, 51, 1). It lay in the Agora opposite the Stoa of Zeus near the junction of the main roads from E., N. and W. as they entered the city while the Panathenaic Way ran to N. and E. Hence it was often used as the starting point in indications of distance (e.g. *IG* II, 1078 ∼ II^2, 2640). Unlike most of the Herms, which were destroyed at the time of the expulsion of the Peisistratids, the Altar continued in use, though the dedicatory inscriptions were covered up. It was desecrated during the Persian occupation of 480-479 B.C. and rebuilt towards the end of the 5th Century. Consequently, in H.'s time it was in ruins but this would in no way involve abandoning the practice of using it as a milestone. In later times it appears to have been called the Altar of Pity, a practice reflecting its rôle as a place of asylum (H., VI, 108; D.S., XII, 39; Lycurg., *In Leocratem* 93).

Bibliography : Judeich, *Topographie von Athen*, pp. 64 ff., 350; Shear, *Hesperia* 4 (1935), p. 355 ff.; Crome, *MDAI(A)* 60-1 (1935-6), p. 305 ff.; Crosby, *Hesperia* Supp. VIII (1949,) p. 82 ff.; Thompson, *Hesperia* 21 (1951), p, 47 ff.; Zuntz, *C&M* 14 (1953), p. 71 ff.; Wycherly, *CQ* 4 (1954), p. 143; id., *The Athenian Agora*, III, p. 119 ff.; Thompson, *The Athenian Agora*, pp. 22, 35, 66 ff.; Harrison, *The Athenian Agora*, XI, p. 112 ff.

ἔς τε Πῖσαν : This and E., *IT* 1 are the oldest occurrences of the name. In H. synonymous with Olympia as also in Pi. (cf. Str., VIII, 3, 31 (C356); Niese, *Genethliakon Robert*, p. 29 ff.) but originally of wider significance. Despite the general belief in antiquity that there had once been a city of that name (Str., l.c.; Paus., VI, 22, 1; Mela, II, 42; Plin., *HN* IV, 14; D.S., IV, 73, 1; St. Byz., s.v. *Πῖσα*; Hsch., s.v. *Πῖσα*; Zonar., 1549 etc.), it was clearly the name of a district (Apollod., ap Str., l.c.), probably the group of Eight Cities of Pisatis of which Apollod. speaks (l.c.) on the mountain road between Elis and Olympia. From the time of Pheidon until the Elian conquest c. 570 B.C. it was the Pisatans who were presidents of the Olympic Games.

Bibliography : Wade-Gery, *CAH* III, p. 544 ff.; Meyer, *RE* XX, 2, 1732 ff.; id., *Artemis Lexikon*, 2332.

ἐπὶ τὸν νηὸν τοῦ Δίος τοῦ ’Ολυμπίου : The splendid Doric temple of the Olympian Zeus (cf. Paus., V, 10, 3) was erected by Lison in H.'s lifetime between 471 and 456 B.C. Previously Zeus had had no temple in the Altis, the centre of his cult being a great open-air altar made from the ashes of sacrificial victims.

Bibliography : Gardiner, *Olympia, its History and Remains*; Smith, *MAAR* 4 (1924), p. 153 ff.; Dörpfeld, *Alt-Olympia*, p. 222; Wiesner, *RE* XVIII, 84 ff.; Meyer, *Artemis Lexikon*, 2126 ff.; Parke, *Oracles of Zeus*, p. 164; Richter, *Greek Art*, p. 21 ff.

ἡ μὲν γὰρ ... πεντακοσίων καὶ χιλίων : The distance between Athens and Olympia *via* Corinth was, according to Schlott, c. 230 kms = c. 144 miles (*Die Ausmaße Ägyptens*, p. 153 ff. after the map ap *Artemis Lexikon*, Abb. 81 between 1152 and 1153). By my calculation the road *via* Corinth, Sicyon, Orchomenus, Sirae, Thelpusa and Stratus to Olympia is rather more than 150 miles.

ἡ δὲ ἐς Ἡλίου πόλιν ... τὸν ἀριθμὸν τοῦτον : According to D.S. (I, 5, 4) this is the distance between Pelusium and Heliopolis which Sethe gives as c. 165 kms = c. 103 miles (*Dodekaschoinos*, p. 64). My calculations (based on the map ap Gardiner, *AEO* II, p. 132* ff.) suggest c. 185 kms = c. $115^1/_2$ miles. The distance along the Canopic Branch, known to Greek sailors and merchants, cannot be calculated with any precision since the branch no longer exists but the distance along the modern Rosetta Branch which was probably about the same length (vide Gardiner, l.c.) is c. 265 kms = c. 165 miles (on the basis of the map Baedeker, *Egypt*^{7}, opposite title page). Thus we obtain the distances:

Pisa-Athens	c. 150 miles
Sea-Heliopolis	c. 165 miles

H. is, therefore, correct in suggesting that the second distance is greater than the first. The implication in his figures that the difference is 1/100th of the distance between the sea and Heliopolis does not fit our figures but since we know neither the precise route intended between Athens and Pisa nor the precise length of the Canopic Branch and since, furthermore, the distances were probably calculated in the usual offhand fashion (vide n. II, 6, 1) we need not disturb ourselves unduly.

8. ἀπὸ δὲ Ἡλίου πόλιος ... παρατέταται : For the division of U.E. into Arabia and Libya vide n. II, 15. The valley of U.E. (mod. Es-Ṣaʿîd) extends for a distance of c. 625 miles to Assuan and varies in width from c. 18 miles to little more than the river bed at points such as Gebel Silsileh and El Khannak (cf. Baedeker, *Egypt*^{7}, map between pp. 244-245).

S. of Cairo it is bounded on both sides by limestone cliffs which give way to sandstone N. of Gebel Silsileh. Mountains they are not but rather rocky walls rising sometimes 200-300 m. They are cut by wadis and undistinguished by peaks or marked slopes, save to the W. of Thebes (Erman-Ranke, *Ägypten*, p. 13 ff.).

The east and west cliffs were given several names in Eg. *D̲wwl* (*PT* 2064); *Mnty* "The Two Fixed Mountains" (*Wb* II, p. 69); *'Iẖmwty* "The Two Banks" (*PT* 279a); *T̲nwy* "The Two Ranges"—and they are often mentioned as yielding precious stones. From the N.K. they have special names—*B3ẖw* "E. Cliff" (*Wb* I, p. 422, 8-13), *M3nw* "W. Cliff" (op. cit., II, p. 29, 11-16). Egypt was said to have come into being at their separation (*PT* 2064 ~ Mercer, *PT* III, p. 918) and to be capable of being destroyed by their coming together again (*PT* 279a-c). They are often represented as two lions, back to back, holding the sun's disc between them (Nagel, *BIFAO* 29 (1929), pl. IV; in general Sethe, *SPAW* 1933, p. 864 ff.; Schlott, *Die Ausmaße Ägyptens*, p. 105 ff.).

φέρον ἀπ'ἄρκτου πρὸς μεσαμβρίης τε καὶ νότου : For the development of geographical science it is essential to be able to orientate oneself in space. By H.'s time an elaborate system involving several principles had been adopted :

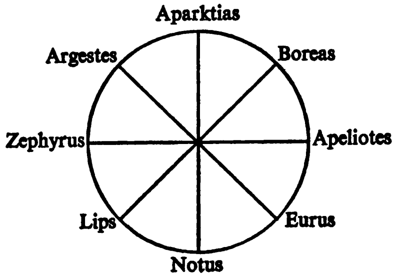
1. Astronomical

(a) The movements of the sun. Several were used:
  (1) Rising and setting of the sun (*ἀνατολαί* and *δύσεις/δυσμαί*).
  (2) The position of the sun at mid-day was employed to mark the S. point (*μεσαμβρίη*). This method occurs first in Hec. (*FgrH* I, F.108).
  (3) The solstitial points, the fixing of which was greatly facilitated by the introduction of the *γνώμων* by Anaximand. (cf. *KR* 99) (*αἱ χειμεριναὶ τροπαί; αἱ θεριναὶ τροπαί*). So *De Aer* passim.

(b) Stellar. Fixed stars e.g. *ἄρκτος* the N. Star gave the N. point.

2. The Winds. Homer frequently used the four winds *Βορέας*, *Εὖρος*, *Νότος* and *Ζέφυρος* (N., E., S. & W. respectively). This method is based on that of orientating oneself by the sun and stars. With the development of precision in astronomical fixes e.g. the solstitial points, it became

more elaborate. In the Hippocratic *Hebd* we find an eightfold division of the horizon by winds :



This system maintained itself throughout antiquity with slight modifications in Hellenistic times.

H. uses a combination of all these methods. Clearly a generally valid scheme had not yet been achieved.

Bibliography : Berger, *Geschichte der wissenschaftlichen Erdkunde*, p. 127 ff.; Rehm, *SBAW* 1916, 3, p. 8 ff.; Gisinger, *RE* SB IV, 564; Nielsen, *C & M* 7 (1945), p. 1 ff.; Ninck, *Die Entdeckung von Europa*, p. 29 ff.

ἀιεὶ ἄνω τεῖνον ... καλεομένην θάλασσαν : The term *ἡ Ἐρυθρὴ θάλασσα* (Lat. *mare rubrum*) is used in several ways in H. :

1. The Persian Gulf (I, 180, 189; III, 30, 3; 93, 2; VI, 20).
2. *ἡ νοτίη θάλασσα* (II, 158, 4; IV, 37).
3. The Indian Ocean (II, 11, 1; 102, 2).
4. Red Sea (II, 158, 2; IV, 39, 1; 42, 3).

The basic meaning is obviously 2 and all others are derived from it. When H. wishes to give an unequivocal name to the Red Sea he calls it *ὁ Ἀράβιος κόλπος* (II, 11, 3; 102, 2; 158, 3, a chapter which uses also *Ἐρυθρὴ θάλασσα* and *νοτίη θάλασσα* to refer to the Red Sea; IV, 39, 1; 42, 2; 43, 3). The term *Ἐρυθρὴ θάλασσα* was first used of the Red Sea because that was the first section of the Southern Ocean which Greeks encountered. At its greatest extension it was applied to the farthest reaches of the Indian Ocean so that the Indus and Ganges were stated to flow into it (Eustath. ad D.P., 1088 ~ *GGM* II, 397 ff.; Curt., VIII, 9, 6). What does it mean here?

1. Taken with *φέρον ἀπ᾽ἄρκτου ... νότον, αἰεὶ ἄνω τεῖνον* implies an E-W direction.

2. To the E. lie two bodies of water called *᾽Ερυθρὴ θάλασσα*—the Red Sea and the Persian Gulf.

3. The data on the *᾽Αράβιος κόλπος* show that H. knew the position of the Red Sea.

Therefore, H. must be aware that the *᾽Αράβιον ὄρος* will reach the Red Sea before the Persian Gulf and *᾽Ερυθρὴ θάλασσα* must, in this case, mean the Red Sea. The name possibly derives from the colour imparted to the water by the reflection of neighbouring desert plateaux (Agatharch., *GGM* I, p. 111 ff.; Treidler, *KP* II, 366 ff.; Copisarow, *VT* 12 (1962), p. 1 ff.), but is more likely to have its origin in the reddish-brown scum (algae) which covers large tracts of smooth water at certain times in summer (*Admiralty Geographical Handbook Series. Western Arabia and the Red Sea*, p. 66). The Eg. name was *W3ḏ wr* "Great Green", sometimes *p3 ywm ꜥ3 n mw ḳd* "Great Sea of the Circling Water" (Erichsen, *P. Harris*, I, 77, 9-10 ~ *BAR* IV, p. 203); Copt. ⲫⲓⲟⲙ ⲛ̄ϣⲁⲣⲓ^{b} or ⲫⲓⲟⲙ ⲛ̄ϩⲁϩ (Crum, *CD* p. 77, a, s.v. ⲉⲓⲟⲙ); Heb. יַם־סוּף *yăm sûph* "Sea of Papyrus" (Brown-Driver-Briggs, *HEL* p. 410, b, s.v. יָם2).

Bibliography : Berger, *RE* VI, 592 ff.; Zyhlarz, *Archiv für äg. Archäologie* 1 (1938), p. 111 ff.; Gardiner, *AEO* II, p. 201* ff.; Towers, *JNES* 18 (1959), p. 150 ff.; Černý, *Mélanges Mariette*, p. 57 ff.; Treidler, *KP* II, 366 ff.; Copisarow, *VT* 12 (1962), p. 1 ff.

The E. desert which extends to the Suez Canal and the Red Sea has an area of 223,000 sq. kms. Its structure is basically a backbone of mountains running N.-S. parallel to the Red Sea and near it with, to W. and N., a plateau highly dissected by long, deep wadis. These often support enough vegetation for animals and form the axes of all travel. The mt. range contains granite, porphyry, gneiss and other crystalline rocks and its proximity to the sea creates enough humidity to make a nomadic economy possible. The whole aspect of the region differs completely from the W. Desert in that it has an abundance of rocks and boulders but very little sand.

Bibliography : Lyons ap Baedeker, *Egypt*^{7}, p. LIX; Erman-Ranke, *Ägypten*, p. 14 ff.; Ball, *Contributions*, p. 10 ff.; Barron-Hume, *The Eastern Desert*, passim; Kees, *Ancient Egypt*, p. 116 ff.; Gardiner, *Egypt of the Pharaohs*, p. 41.

ἐν τῷ αἱ λιθοτομίαι ἔνεισι ... τὸ ὄρος : The area of the Mokattam Hills, E. of Cairo where the desert cliffs turn N.E. towards the Wadi Tumilat. These hills belong to great range of nummulitic limestone mountains and have a maximum height of 700 ft. above sea level. The hills of Tura, Maʿsara and Ayan produced extremely fine limestone which was frequently used for building purposes, particularly in covering monuments and making stelae and sarcophagi. Halls and gangways (*σπήλαια* ap Str., XVII, 1, 34 (C809)) are still to be seen. The most famous quarry is, and probably was in antiquity, Tura (Eg. *Drɜw*, *Trɜw*, old form *R-ɜw*. Gk. *Τροία* hence *Τρωικὸν ὄρος* (Str., XVII, 1, 34 (C809)) and *Τρωικὸς λίθος* (Ptol., *Geog* IV, 5, 27)). *ʿnw*, which often occurs in expressions like *ʾInr ḥḏ nfr n ʿnw* "Fine limestone of *ʿnw*", is probably identical. References occur as early as the IVth Dyn. but the stone was employed extensively at Saqqara in the IIIrd. Inscriptions on the site of the quarries run from the XII-XXXth Dyns. (*PM* IV, p. 74 ff.).

H. implies (cf. also II, 124, 2; D.S., I, 63; Str., XVII, 1, 34 (C809); Plin., *HN* XXXVI, 17) that all the stone for the Pyramids of Giza, with the exception of half that of Mycerinus, came from the Mokattam Hills. This is not correct. Most of the core is made of limestone quarried on the W. plateau itself. S.E. of the Third Pyramid a quarry is still to be seen which, according to Reisner (*Mycerinus*, p. 69 ff.), was capable of supplying all that was needed for the cores of the pyramids, the foundation platforms of the related temples and the core walls of the latter. The casing stones of the Pyramids of Khufu and Khafrēʿ are of a fine limestone of the Mokattam type, as is the upper portion of the Third. The same holds true of the Step Pyramid of Zoser at Saqqara. The fact that Assuan granite was employed on some scale at Giza is unknown to H. apart from its use as a facing on the Third Pyramid (cf. II, 134, 1).

Bibliography : Vyse, *Pyramids of Gizeh*, III, p. 90 ff.; *PM* IV, p. 74 ff.; Baedeker, *Egypt*^{7}, p. 125 ff.; Sethe, *SBAW* 1933, p. 864 ff.; Brugsch, *DG* pp. 451, 884; Gauthier, *DG* III, p. 112; Gardiner, *AEO* II, p. 126* ff.; Engelbach-Clarke, *Ancient Egyptian Masonry*, Index, s.v. Tura quarries; Lucas-Harris, *AEMI*^{4} p. 52 ff.; Edwards, *The Pyramids of Egypt*, p. 212; Montet, *DG* I, p. 162 ff.

τῇ δὲ αὐτὸ ... τὰ τέρματα εἶναι : The time of 2 months for the E.-W. journey from Egypt to the Red Sea is incredible. Times for ancient E.-W. caravan routes in modern times are (after Baedeker, op. cit., p. 372 ff.; Kees, op. cit., p. 120 ff.) :

Qena-Myos Hormos.	5-6 days by camel.
Qena-Qoseir.	4-5 days *via* the Wadi Hammamat by camel.
Ridîsîya (above Edfu)—Berenice.	The Russian Egyptologist Golenischeff took 11 days.

Data which seem relevant to the solution of the discrepancy between H. and these figures are :

1. *’Ερυθρὴ θάλασσα* is here to H. the Red Sea (vide supra) and must be the E. boundary of the *’Αράβιον ὄρος*.
2. The *’Αράβιον ὄρος* is said to stretch between the valley and the Red Sea.
3. The E. boundary of the *’Αράβιον ὄρος* is said to bear *λιβανωτός*.
4. Only Arabia i.e. the land of the *’Αράβιοι* produces incense (III, 107, 1).
5. All the land E. of the Nile is *’Αραβίη* (vide n. II, 15).
6. Expeditions were made from Egypt across the desert in a W.-E. direction to the Red Sea in search of incense from the time of the O.K. (Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, p. 8 ff.; Herzog, *Punt*; Vycichl, *CdE* 45 (1970), p. 318 ff.). Having reached the W. coast the Egs. took ship and sailed S. to Punt, returned, disembarked their cargo and brought it by land across the desert.
7. Incense trees did grow on the N.E. coast of Africa in mod. Somaliland (Hepper, *JEA* 55 (1969), p. 68 ff.), a fact well known to the Egs. since it is, either partly or entirely, the Land of Punt (n. II, 158).
8. In the Roman Period it took 70 days to travel the caravan route down the W. coast of Arabia between Minaea, the S. terminus of the incense trade of Arabia Felix, and Aelana (al-‘Aqabah) (Str., XVI, 4, 4 (C768); cf. ib. 4, 24 (C781-2)). Therefore, the journey *κατὰ γῆν* from Minaea to the frontiers of Egypt would have required between 2 and 3 months.

This material could have given rise to H.’s erroneous statement in some such manner as the following. He, or his source, may have heard of the Punt expeditions in the terms “They travelled E. across the desert for many days and obtained incense which they brought back to Egypt”. It is perfectly possible that the informant was ignorant of the sea journey involved or simply omitted to mention it. Since H. knew perfectly well that a sea existed to the E. and was convinced that incense could only be got in *'Αραβίη*, it would be a natural assumption that the source of supply lay on the W. Coast of the Red Sea and, in any case, he may have been encouraged in this by reports of incense trees growing in Somaliland. Why, however, did he think that the distance was a journey of 2 months? Datum 8 could provide the answer. He might have heard from someone, Eg., Gk. or otherwise, that to reach the Arabian *λιβανωτοφόρα* from Egypt required a journey of, in round figures, 2 months. The conflation of all this information could then have led H. to the conclusion that, by travelling E. from Egypt for 2 months across *'Αραβίη* (i.e. the Eastern Desert), one reached the incense country on the West Coast of the Red Sea in 2 months. Such misleading statements and interpretations have their parallel elsewhere in H. (n. II, 33; Introduction, p. 77 ff.). We should, of course, have to assume that he had a strange concept of the course of the Red Sea, taking it much further E. of S. than it runs, but the fabulous nature of his statements on the Arabians (cf. the Phoenix II, 73; the flying snakes, II, 75-76; III, 107 ff.) proves that his information on this part of the *οἰκουμένη* was vague in the extreme.

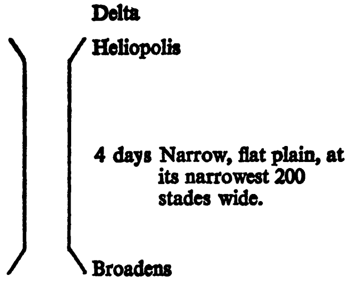
τὸ δὲ πρὸς Λιβύης ... ψάμμῳ ... μεσαμβρίην φέροντα : The W. plateau is very different from that to the E. of the valley and forms the N.E. part of the Libyan desert, one of the most arid regions in the world. It presents an appearance of bare rocky plateaux and high lying stony plains, often covered by accumulations of drifting sand which sometimes form rows of N.-S. running sand dunes 100-200 ft. high and at other times appear as huge, rolling plains of sand. The area contains a line of oases running parallel to the Nile and representing the line of the old Nile bed during the Tertiary Period. These habitable depressions are the Kharga, Dakhla, Farafra, Bahariya and Siwa Oases. Other depressions also occur, in which salt lakes and salt marshes are found, the biggest being the Qattara Depression.

Bibliography : Lyons ap Baedeker, *Egypt*^{7}, p. LXX; Erman-Ranke, *Ägypten*, p. 14; Kees, *Ancient Egypt*, p. 127 ff.; Ball, *Contributions*, p. 9 ff.

αἱ πυραμίδες : *Πυραμίδες*, as with us, mainly of the Pyramids of Giza (cf. II, 12, 97, 124-28, 134-35), though H. also refers to pyramids of

Moeris (II, 101, 148-9) and Asychis (II, 136, 3-4). In fact the desert plateau to the W. of the valley contains royal pyramids from Abu Roash to El Kula beginning in the IIIrd Dyn. and ending in the early XVIIIth. None was as large and few as well made as the Great Pyramid of Giza. Those of the Vth and VIth Dyns. were made of a core of small stone faced with Tura limestone (Edwards, *The Pyramids of Egypt*, p. 175 ff.) whilst M.K. examples in Middle Egypt had rubble or mud brick cores faced with limestone and were relatively small. Those of the XVIIth Dyn. in W. Thebes must have been even more insignificant. Many will have been already in ruins by H.'s time and their small size meant that blown sand would cover a large part of them. It is, therefore, not surprising that they should pale into insignificance beside the 3 splendid creations of the IVth Dyn. in the Giza Necropolis (see further nn. II, 124 ff.).

τὸ ὦν δὴ ἀπὸ Ἡλίου πόλιος ... Αἴγυπτός ἐστι : Like much else in Bk. II an object of the wrath of Aristid. *Or* 36, 46. According to H. the geographical structure is as follows :


Delta
Heliopolis
4 days Narrow, flat plain, at its narrowest 200 stades wide.
Broadens

This is the *πέλεκυς* theory of the geography of Egypt championed by Hec. and described in Ps. Scyl. as follows

> *Ἔστι δὲ ἡ Αἴγυπτος τοιάδε τὴν ἰδέαν ὁμοία πελέκει. Ἔστι γὰρ κατὰ θαλάτταν πλατεῖα, κατὰ δὲ μεσογείαν στενωτέρα, κατὰ δὲ Μέμφιν στενωτάτη αὐτῆς, ἔπειτα δὲ εἰς μεσογείαν ἀπὸ Μέμφεως ἰόντι πλατυτέρα, κατὰ δὲ τὸ ἀνώτερον αὐτῆς πλατυτάτη.*
>
> *GGM* I, p. 80 ff.

H. has, as not infrequently, modified the Hec. doctrine on the basis of *ὄψις* (vide Introduction, p. 130). There are two alterations :

1. The distance of 4 days.
2. H. starts at Heliopolis instead of Memphis.

But he has not abandoned it clearly because he has seen something 4 days' sail S. of Heliopolis which fits the doctrine. What was it? Any attempt at a solution must begin with *ἡμερέων τεσσέρων*. (The solution of Westberg (*Klio* 14 (1915), p. 339 ff.) and Viedebantt (ib. 16 (1920), p. 100 ff.) that the area S. of Hermopolis and Antinoe is meant suffers from ignoring this point).

An average day's sail will be at maximum c. 35 miles per day. At tourist speed in a sailing dahabiyeh it might be c. 20 miles per day, even less (vide n. II, 5, 1). Therefore, four days' travelling from Heliopolis will take us at best 140 miles. Allowing 10 miles between Heliopolis and Cairo by canal and river, this means that the furthest point attainable to the S. is the area around El Sheik Hassan, downstream of Kolosna (133 miles S. of Cairo according to figures in Baedeker, op. cit., p. 226). Between Heliopolis and that point there are several relevant features :

1. The Fayyûm.
2. Between Helwan and Wasta the valley is unusually narrow. At Cairo it is c. $9^{1}/_{2}$ miles, immediately S. c. 6 miles and retains that distance to El Wasta where it widens slowly to c. $12^{1}/_{2}$ miles along the line El Lahun-Ashmant. From there until Farshut it maintains an average width of $12^{1}/_{2}$-15 miles (figures after Ehrenberg, *Klio* 16 (1920), p. 321 ff.).
3. The river hugs the eastern cliff leaving relatively little ground for settlement and agriculture.

(1) The Fayyûm, championed by Sourdille (*La Durée*, p. 120 ff.; cf. Ehrenberg, op. cit., p. 321 ff.), is superficially attractive :

(a) It could be regarded as a widening of Egypt S. of Heliopolis.
(b) Crocodilonpolis in the Fayyûm is over 100 miles from Heliopolis *via* the el Magnoun Canal i.e. c. 4 days' sail.

The crucial objection is that H. is clearly talking in this section of the space between the Libyan and Arabian Mts. (so also Powell, *Hermes* 68 (1933), p. 125).

(2) El Wasta has been championed by Ehrenberg (op. cit., p. 322) as the point where the valley widens and there is much to recommend this view :

(a) It lies c. 61½ miles from Heliopolis if we allow 10 miles by canal and Nile to Cairo and 51½ miles from there to Wasta itself. At 20 miles per day this distance would take 3 days. In view of the imprecision of H.'s times and distances this is a fair approximation to 4 days' sail. Ehrenberg prefers to ignore the figure 4 altogether.
(b) Schäfer informed Ehrenberg (l.c., n. 3) that, although in terms of distance the widening was not particularly great, "diese Verbreiterung für den visuellen Eindruck durchaus beträchtlich und auffallend erscheint". It is, therefore, possible that H. could over-estimate it.

(3) The vagaries of the river's course are used by Powell (op. cit.) but he postulates a widening at Assiut far beyond the maximum 4 day limit. There is something to be said for this :

(a) At Manfalût the E. cliffs, which were previously 2-300 m. high, become lower. At Abnûb the ground hardly rises more than 25 m. in 4 kms. so that the transition from plain to desert is quite gentle (Powell, op. cit.).
(b) The river at Manfalût moves in the centre of the valley and from that point often leaves a great deal of land for settlement on the E. bank. After the conditions to the N. this might well create the impression of greater width (Powell, op. cit.).
(c) Of this area a modern scholar writes

> "The south was a narrow strip (the ancient Thebaïd, the present-day *Saïd*) which widened out a little at Asyut to become the region known as Middle Egypt (where an arm of the Nile runs westwards and finally spreads out in the Faiyum)."
>
> Yoyotte, ap Posener, *Dictionary*, p. 76.

The objections to this explanation are

1. Manfalût lies 220 miles upstream from Cairo (after Baedeker, op. cit., p. 231), nearly 230 from Heliopolis i.e. 6-7 days at the fastest conceivable speed. This area could not possibly have been reached in 4 days. H. is by no means trustworthy in such matters (vide n. II, 9) but, since in this case he appears to be correcting a Hecataean tradition on the basis

of his own experience, it seems reasonable to assume that this figure would correspond to his experience and that he would get it at least approximately right. Who emends (as Dietsch & Hyde) ἐς ἀφανὲς τὸν μῦθον ἀνενείκας οὐκ ἔχει ἔλεγχον.

2. Powell's attempt to reconcile the figure 4 days' sail with Assiut by calculating on the basis of II, 9, 1 is inadmissible because the figure of 9 days from Heliopolis to Thebes cannot possibly be correct.

Of these suggestions 2 alone fits H.'s data with some measure of exactitude and we, therefore, conclude that the evidence favours Ehrenberg and that the widening of Egypt to which H. refers is that at El Wasta.

Bibliography : Wiedemann, *Philologus* 46 (1888), p. 172 ff.; Jacoby, *RE* VII 2680; Sourdille, *La Durée*, p. 112 ff.; Westberg, *Klio* 14 (1915), p. 339 ff.; Viedebantt, ib. 16 (1920), p. 100 ff.; Ehrenberg, ib., p. 321 ff.; Powell, *Hermes* 68 (1933), p. 123 ff.; id., ib. 71 (1936), p. 475 ff.; Schlott, *Die Ausmaße Ägyptens*, p. 160 ff.

στάδιοι ... καλεόμενον : For γνώμη vide Introduction, p. 86 ff. 200 stades at 179 m. per stade, the lowest likely (*Artemis Lexikon*, 3424), = 35-36 miles. Something has gone badly wrong. Between Heliopolis and Wasta the width of the valley is much less than this (vide supra). In fact, unless the Fayyûm is included, the Nile Valley N. of Assuan never attains anything like this width anywhere along its course. Either a confusion in his memory or notes is responsible or H. had an extraordinarily bad eye. As far as the latter is concerned Sourdille points out that the eye naturally exaggerates distances and that in Egypt atmospheric conditions could aggravate this tendency (op. cit., p. 140 ff.). If these disadvantages were added to a naturally poor eye for distances we might well have the explanation. Certainly no better theory presents itself.

9. **ἀπὸ δὲ Ἡλίου πόλιος ... ἀνάπλοος ἐννέα ἡμερέων ... ὀγδώκοντα ἐόντων :** Both time and distance are quite incorrect.

Distance.

According to H. Thebes-Heliopolis by water = 9 days = 4860 stades = 81 schoinoi = c. 962.28 kms. = c. 600 miles. The actual distance is 722.5 kms. or c. 450 miles. Several solutions suggest themselves:

(a) The authority for the figure 81 *σχοῖνοι* used a 40 stade *σχοῖνος* whereas H. converted at the rate of 60 stades. The alternative count makes the distances 81 × 40 = 3240 stades = 641.52 kms. (Sethe, *Dodekaschoinos*, p. 8).

(b) Schwartz (*RA* 6 Series 37 (1951), p. 145), following Westberg (*Klio* 14 (1915), p. 338 ff.), postulates a stade of 148.85 m. At this rate 81 *σχοῖνοι* at 60 stades per schoinos = 723 kms. which is not far from the truth.

(c) The mistake arises from imprecise methods of calculating distance (vide n. II, 6, 1).

(b) can be put out of court immediately :

1. The length of the Herodotean stade is neither known nor knowable (n. II, 6). Therefore, Schwartz's solution is methodologically unsound (cf. Ehrenberg, *Klio* 16(1920), p. 319, n. 2).
2. There is no evidence of a stade of 148.85 m. (Schwartz's special pleading is blatantly fallacious).
3. The theory assumes that H.'s measurements are going to be correct without attempting to show how such accurate measurements could possibly have been obtained.

As for Sethe's scheme, it simply reduces the discrepancy without eliminating it. We are still left with an incorrect figure which we have to explain—presumably by imprecise techniques for obtaining distance. The scheme is, therefore, redundant and it seems preferable to assume that (c) is the cause of the trouble.

Time.

H.'s measurement of the distance gives a rate of travel 1 day = 540 stades = c. 66 miles. At the actual distance this is reduced to c. 50 miles per day but both are absolutely impossible; for in the very best conditions in modern times Heliopolis-Thebes would take at least 13 days by sailing boat (Sourdille, *La Durée*, p. 108; Ehrenberg, op. cit., p. 320, n. 2) which gives a rate c. 35 miles per day. This difficulty has never been explained (Sourdille's attempt op. cit., p. 109 ff. was destroyed by Ehrenberg, op. cit., p. 320, n. 2; cf. also Schwartz, op. cit., p. 143). The possibilities are only two :

1. There is an outright mistake—a slip in memory or recording by H. or his source (cf. Introduction, p. 119 ff.).

2. The text is corrupt. Possibly *Θ* "9" is corrupted from *ΙΘ* "19". This would give a day's journey of c. 23 miles which would be perfectly possible (Ehrenberg, op. cit., p. 320, n. 2).

H.'s general tendency to error in such matters creates a strong presumption in favour of the former explanation.

τὸ μὲν παρὰ θάλασσαν ... τρισχιλίων : vide n. II, 6.

ὅσον δέ τι ἀπὸ θαλάσσης ... ἑξακισχίλιοι : The distance from the sea to Thebes = 6120 stades = 1211.76 km. = c. 756 miles. The real distance = c. 890 kms. = 615 miles. Sethe (l.c.) assumes that H. obtained this figure by converting 102 schoinoi at 60 stades per schoinos. He suggests that the source meant 102 schoinoi at 40 stades = 807.84 kms. = c. 574 miles. It is easier to believe that conversion from time to distance is the cause (vide supra, p. 41 ff.).

τὸ δὲ ἀπὸ Θηβέων ... στάδιοι ... εἰσι : Thebes-Elephantine = 1800 stades = 356.4 kms. = c. 222 miles. The true distance = c. 220 kms. = c. 137 miles. Here Sethe (l.c.) suggests that H.'s figure = 30 schoinoi at 60 stades and that the authority meant 30 schoinoi at 40 stades = 237.6 kms. This figure is nearer the truth but again haphazard, imprecise methods of calculation are a preferable explanation (vide supra, p. 41 ff.).

Bibliography : Sethe, *Dodekaschoinos*, p. 8; Sourdille, *La Durée*, pp. 107, 130, 163; Viedebantt, *Klio* 14 (1915), p. 212; Ehrenberg, ib. 16 (1920), p. 318 ff.; Ball, *Egypt in the Classical Geographers*, p. 14; Gwyn Griffiths, *JNES* 25 (1966), p. 58; Schlott, *Die Ausmaße Ägyptens*, p. 154 ff.

10. ταύτης ὦν τῆς χώρης τῆς εἰρημένης ἡ πολλή ... ἐπίκτητος Αἰγυπτίοισι : Cf. II, 4, 3; 5.

τῶν γὰρ ὀρέων ... κόλπος θαλάσσης : i.e. to a height of 3 days above the Lake of Moeris (cf. II, 5, 1). Egypt has been covered in whole or part by the sea during many periods of geological history (Carboniferous, Cretaceous, Eocene, N. in the Oligocene and Miocene, the valley in the Pliocene). The valley itself (*τῶν ... ὀρέων τῶν εἰρημένων τὸ μεταξύ*) did not come into existence until the latter part of the Miocene Period (c. 13 million years ago) when the pre-historic Nile which had previously flowed to the W. of its present course approximately along the line of the Libyan oases burst through the granite barrier at Assuan and began to gouge a path through the sandstone and limestone plateau to the N. to meet the sea approximately in the latitude of Cairo. This process of erosion gave rise to the valley of U.E. of which H. is speaking here. Subsequently in Pliocene times (c. 10 million years ago) the river was displaced when the sea pushed S. to occupy the entire valley as far as Assuan, turning it into a vast gulf c. 100 m. deep. Towards the end of the same period (rather before c. 500,000 years ago) the sea withdrew and the Nile once more occupied the valley, this time debouching at the level of the Fayyûm. To begin with the river was much greater than now, its banks lying 10 kms. beyond their modern position, but under the pressure of desiccation it slowly shrank to its present proportions, cutting, in the process, a series of terraces in the valley walls, eight of which have been counted, the highest at c. 100 m. From the Pleistocene Period (c. 500,000 years ago) the Nile has been depositing sediment, building up a layer of alluvium on both banks and also forming the Delta. It reached its present position during the Aurignacian (c. 10,000 B.C.). The observations of H. and the Ionians have not, therefore, played them false.

Bibliography : Ball, *Contributions*, p. 17 ff.; id., *Egypt in the Classical Geographers*, p. 10; Drioton-Vandier, *L'Égypte*^{4}, p. 1 ff.; Gardiner, *Egypt of the Pharaohs*, p. 385 ff.; Bonneau, *La Crue du Nil*, p. 13 ff.

ὥσπερ τά τε περὶ Ἴλιον ... ἤπειρον πεποίηκε : *τεκμήριον* 3. A series of Gk. examples of alluvial rivers is used *κατ'ἀναλογίαν* as proof of H.'s thesis (vide Introduction, p. 164 ff.). Note that 4 of the *exempla* lie in Asia Minor where conditions were admirably suited to the formation of Deltas and alluvial plains (Thomson, *History of Ancient Geography*, p. 103 ff.). This factor was of paramount importance in interesting H. and his Ionian predecessors in alluvial phenomena (vide supra, p. 36). Hecataean influence is certain in this passage :

1. Hec. was certainly interested in sedimentation (vide supra, l.c.).
2. In the *Περιήγησις* he certainly discussed Ilium (F. 221-4), Miletus (F.239-241) and Acheloos (F.102c & 109 with *Kommentar*).

3. The Asiatic examples are listed from N.-S. as though H. had a map or list before him.

τά τε περὶ Ἴλιον : The alluvial character of the land between Hissarlik and the sea is strongly emphasized by Str. (XIII, 1, 31 (C595)), the rivers responsible being the Old Scamander (Kalifatli Asmak) and the Simois (Dümbruk-Su). Topographically, there are clear similarities with the Nile Delta :

1. The Scamander has more than one mouth, a western debouching near Kum Kaleh and an eastern running into a salt lagoon.
2. *Ἕλη* abound. In fact, the Simois never reaches the sea but ends in a salt marsh while swamps also occur between the Mendere (New Scamander) and Kalifatli Asmak.

The formation of new land on any scale ended long ago because the point has been reached where the currents of the Hellespont sweep away tongues of land almost as soon as they are formed (vide n. II, 12, 1).

Bibliography : Dörpfeld, *Troia und Ilion*, II, p. 612 ff.; Bürchner, *RE* IIIA, 430; Leaf, *Strabo on the Troad*, p. 158 ff.; Cook, *The Troad.*

Τευθρανίην : Cf. Plin., *HN* II, 201. T. may be either (a) a city or (b) a district.

(a) The port of T., main city of the district of *Τευθρανίη*, probably lay S.W. of Pergamum with its acropolis on the height of Ajios Ilias and the main town on the site of mod. Kalerga. It figures as one of the cities given by Darius to Demaratus whose descendants ruled there for almost 100 years (H., VI, 70; X., *An* II, 1, 3; VII, 8, 17).

(b) *Τεύθραντος πεδίον* (Pi., *O* 9, 71), *Τευθραντὶς γᾶ* (*CIG* no. 3538), *γᾶ Τευθραντίας* (*AP* III, 2), clearly the area over which the synonymous city held sway. Ps. Scyl. (98 ~ *GGM* I, p. 70) places it firmly on the coast.

In view of the close proximity of *Ἴλιον* and *Ἔφεσος* in this passage we must assume, with Ruge (*RE* VA, 1159), that H. is referring to (a).

The port of T. was gradually isolated from the sea by the considerable sedimentary deposits brought down by the R. Caicus (mod. Bakyr tschai) which has formed a Delta at its mouth. Like the Nile Delta the Caicus plain is subject to flooding.

Bibliography : Baedeker, *Konstantinopel und Kleinasien,* p. 244 ff.; Bürchner, *RE* X, 1501 ff.; Ruge, ib. VA, 1158 ff.; Treidler, *KP* III, 46.

Ἔφεσος : The ancient port of Ephesus is now 6 miles inland, though once it lay at the mouth of the Cayster. This river (mod. Karasan or Kütschük Menderes), c. 125 kms. long, rises in the Tmolus range and brings down large quantities of sediment from the hills, silting up the area at its mouth very quickly (cf. Str., XIII, 1, 24 (C641); Plin., *HN* V, 115). Between the time of Croesus and Lysimachus its mouth had advanced c. $^3/_4$ km. By the 1st Century A.D. it lay about $^1/_2$ km. W. of Kurutepe and by the time of the late Roman Empire was within 1 km. of its present position. The Cayster was assisted in filling up the bay by material brought down by mountain streams to the E. and S.E. of the plain and also by the dune-building activity of the sea. The resultant silting-up brought the irrevocable ruin of the city during the Turkish Period. As in the Nile Delta, swamps abound.

Bibliography : Bürchner, *RE* XI, 100 ff.; Miltner, *Ephesos,* p. 3 ff.; Keil, *Ephesos,* p. 10 ff.; Schäfer, *Artemis Lexikon,* 821 ff.; Zschietzschmann, *KP* II, 293; Treidler, *KP* III, 172; Bean, *Aegean Turkey,* p. 160 ff.

Μαιάνδρου πεδίον : The Maeander (Menderes) has brought down a vast amount of sediment which has succeeded in filling up the ancient Latmian Gulf and still extends the land at the rate of 20 ft. per year. As with the Nile Delta, swamps abounded and, in modern times at least, a lake is to be found near the mouth of the river called the Bafa golu (the remains of the Old Latmian Gulf) which is reminiscent of the *λίμναι* mentioned in the N. Delta by H. (II, 93, 1). Another point of resemblance is that the plain is prone to flooding.

The deposition of this sediment and the consequent separation from the sea were disastrous for at least three cities in the area—Old Priene which was cut off so early that even its site is unknown, Myus which could anchor 200 warships in 499 but could only be reached by a 3 mile journey up river by small boat in Str.'s time (XIV, 1, 10 (C636)) and, above all, Miletus which lay on a promontory at the mouth of the Latmian

Gulf. It was already suffering disastrously in the 5th Century and today lies nearly 5 miles from the sea. This situation undoubtedly exercised a crucial influence on the development of the philosophical speculations on the origins of the earth so closely associated with Miletus (Introductory n. to II, 5; Introduction, p. 54).

Bibliography : Baedeker, *Konstantinopel und Kleinasien*, p. 212 ff.; Bean, *Aegean Turkey*, pp. 219 ff., 245 ff.; Ruge, *RE* XIV, 535 ff.; Rayet-Thomas, *Milet et le Golfe Latmique*, I, p. 19 ff.; Wiegand-Schrader, *Priene*, p. 7 ff.; Treidler, *KP* III, 896; Meyer, *Artemis Lexikon*, 1959; Mayer, *RE* XV, 1623; Schede, *Die Ruinen von Priene*, p. 1 ff.; Bendt, *Topographische Karte von Milet*.

ὥς γε εἶναι σμικρὰ ταῦτα ... μεγάλα εἰσί : This section illustrates two characteristics of H.'s thinking in the *Αἰγύπτιος λόγος* :

(a) The obsession with the size of things Eg. (vide Introduction, p. 143 ff.).
(b) The tendency to disparage Gk. notions in favour of the Egs. (vide Introduction, p. 154 ff.).

καὶ οὐκ ἥκιστα 'Αχελῴου ... ἤπειρον πεποίηκε : Ps. Scyl. 34 ~ *GGM* p. 37 writes

> *Ἡ δὲ 'Ακαρνανία ἐστὶ πᾶσα εὐλίμενος. καὶ κατὰ ταῦτα νῆσοι παρακεῖνται πολλαὶ, ἃς ὁ 'Αχελῷος προσχωνύων ἤπειρον ποιεῖ. Καλοῦνται 'Εχινάδες αἱ νῆσοι. εἰσὶ δὲ ἔρημοι.*

Cf. Ps. Scymn., 468 ff. ~ *GGM* p. 215; Th., II, 102.
The alluvial character of the plain of the Acheloos is immediately obvious. It contains several heights which look like islands surrounded by alluvium and the sea off the coast is often stained yellowish brown while to the W. lie several islands which are in the process of being joined to the land. Furthermore on the plain itself swamps abound. For all this, the territory at the mouth of the Acheloos is not, strictly speaking, a Delta like that of the Nile, Caicus or Scamander but an area of mountain and valley which has sunk beneath the waves and then been covered with sediment until land broke the surface once more. The accumulation of sedimentary deposits inflicted on the ancient city of Oeniadae much the same fate as befell Miletus and Priene in that it had to be abandoned and a new city founded nearer the sea (Str., X, 2, 2 (C450)). The latter states that it lay 70 stades from the coast. The distance is much the same today

because the maximum point of extension had by then been reached in the area since beyond Kutsilaris and Oxya the currents in deeper water sweep the alluvium away. For the same reason the remaining Echinades will never, as implied by H. (*ἤδη ἤπειρον πεποίηκε*), be joined to the mainland.

Bibliography : Philippson, *Griechische Landschaften*, II, 2, p. 400 ff.; Kirsten-Kraiker, *Griechenlandkunde*^{5}, II, p. 756; Hirschfeld, *RE* I, 213 ff.; Meyer, *Artemis Lexikon*, 10; Kirsten, *KP* I, 43 ff.

11. Ἔστι δὲ τῆς Ἀραβίης χώρης ... ὑπὸ τοσούτου τε ποταμοῦ καὶ οὕτως ἐργατικοῦ : H. develops and explains the thesis of II, 5 & 10 by a vivid analogy (cf. n. II, 26) suggesting that Egypt was once like the Red Sea and that, if the Nile could be diverted into it, the Red Sea would be filled up just as Egypt had been. In fact, in prehistoric times a branch of the Nile *did* flow into the Gulf of Suez which extended further N. than it does at present (Posener, *CdE* 13 (1938), p. 259 ff.).

τῆς Ἀραβίης χώρης : Vide n. II, 15.

κόλπος θαλάσσης : i.e. *ὁ Ἀράβιος κόλπος* = the Red Sea (vide n. II, 8, 1).

ἐκ τῆς Ἐρυθρῆς καλεομένης : i.e. the Indian Ocean (vide n. l.c.).

μῆκος μὲν πλόου ... ἡμέραι ἀναισιμοῦνται τεσσεράκοντα ... χρωμένῳ : The precise point meant by *ἐς τὴν εὐρέαν θάλασσαν* is not clear but if we assume it to lie approximately in the longitude of Abd al Kuri at the extreme E. of the Gulf of Aden the distance from modern Suez (*ἐκ μυχοῦ*) is c. 1900 miles. If, on the other hand, we take it to be the Bab el Mandeb, the distance is c. 1300. How much is 40 days *εἰρεσίῃ χρωμένῳ*? According to H., IV, 86 1 day's journey by sail = 700 stades i.e. c. 81 miles (vide n. II, 5, 2). Therefore, 40 days = c. 40 × 81 = c. 3, 240 miles, which is much too long. Several explanations suggest themselves :

1. H.'s rate of sail in IV, 86 is unusually fast. If we use the standard figure i.e. 500 stades per day = 93 kms. = c. 58 miles, 40 day's sailing will amount to 40 × 58 = c. 2320 miles which is much nearer the truth *if he is thinking of the extreme E. of the Gulf of Aden as the terminus.*

2. H.'s figure simply reflects the time it took including stops for watering, victualling, trading etc. and the delays imposed by the treacherous sailing conditions which are notorious hazards to navigation in the Red Sea (cf. Str., XVII, 1, 45 (C815); Baedeker, *Egypt*^{7}, p. LXVIII; *Admiralty Geographical Handbook Series. Western Arabia and the Red Sea*, pp. 61, 66, 156 ff.). If we take the Bab el Mandeb as the terminus, we thus get an average of c. $32^1/_2$ miles per day which is slow but by no means impossible.

In view of the wildly inaccurate statement which follows it seems wiser not to assume the precision presupposed by method 1 and 2 is, therefore, preferable.

εὖρος δέ, τῇ εὐρύτατός … ἥμισυ ἡμέρης πλόου : At its widest the Red Sea is c. 220 miles (Baedeker, op. cit., p. 424). Even at H.'s high average for a day's sail this would take over 3 days. We have no alternative but to assume that H., or his source, has made a very bad mistake. Perhaps lurking at the back of this notion is a statement like "It took us $^1/_2$ a day to get from one shore to the other" (which in some parts (e.g. the Gulf of Suez) would be true), and after passing through several mouths this had come to H. in the form in which we find it stated here (vide in general Introduction, p. 77 ff.). Ball suggests (*Egypt in the Classical Geographers*, p. 14) that the true width was probably unknown to early travellers because they voyaged close to the W. coast of the Red Sea.

ῥηχίη δ'ἐν αὐτῷ καὶ ἄμπωτις ἀνὰ πᾶσαν ἡμέρην γίνεται : Although scientific study of tides is in evidence only from the 4th Century B.C. (Thomson, *History of Ancient Geography*, Index, s.v. tides), they were naturally a source of great interest to the Gks. even earlier since such movements are rarely visible to the naked eye in the Mediterranean. It is, however, not true to say that the Mediterranean is tideless. Tides occur throughout, though they become less pronounced the further east one proceeds. These movements assume some importance at the back of gulfs (e.g. the Malian Gulf (H., VII, 198), the Isthmus of Corinth, the Syrtes (1.6 m.), the Gulf of Tarentum and the Adriatic where the spring tide reaches a height of 1 m. at Venice) but make themselves felt much more strongly in the form of alternating currents, as in the Euripus. In view of this, a daily *ἄμπωτις* and *ῥηχίη* would obviously be a great *θῶμα*. In fact, tides in the Red Sea vary considerably—7 ft. at Suez, 2 ft. at the Brothers Islets, a little more than 1 ft. in the S. of the Gulf of Suez, elsewhere sometimes imperceptible (*Admiralty Geographical Handbook Series*, op. cit., p. 61).

Bibliography: Berger, *Geschichte der wissenschaftlichen Erdkunde*, Index, s.v. *Ebbe und Flut*; Thomson, *History of Ancient Geography*, Index, s.v. tides; Philippson, *Das Mittelmeergebiet*, p. 54 ff.; *Admiralty Geographical Handbook Series. Western Arabia and the Red Sea*, p. 61; Böker, *KP* II, 794.

ἐκ τῆς βορηίης θαλάσσης ... ἐκ τῆς νοτίης : The sense of symmetry so obvious in the partitioning of the *οἰκουμένη* (vide Introduction, p. 126 ff.) also extended to the seas which, in the simplest and almost certainly the earliest scheme, were divided into the Northern Sea i.e. that which washed the N. and N.W. part of the *οἰκουμένη* and the Southern which washed the S. and S.E. section. Doubtless, this *Drang nach Symmetrie* was an important factor in suggesting to H. this argument *κατ᾽ ἀναλογίαν*.

12. **τοῖσι λέγουσι αὐτά** : i.e. *οἱ ἱρέες* (II, 4, 3) and other Greek enquirers such as Hec. who remain unmentioned.

καὶ αὐτὸς οὕτω κάρτα δοκέω εἶναι, ἰδών τε : Another example of insistence on autopsy in this section (vide n. II, 5, 1). The scientific nature of this chapter has often been remarked upon (e.g. Thomson, *History of Ancient Geography*, p. 103).

τὴν Αἴγυπτον προκειμένην τῆς ἐχομένης γῆς : *τεκμήριον* 4 (vide n. II, 5, 1). Deltas are normally deposited at the mouths of rivers which carry large quantities of matter in suspension and which debouch into small, sheltered gulfs because the river, when it reaches the sea, is abruptly slowed thereby losing the power of carrying the matter and being forced to drop it. This matter will then gradually build up at the river mouth into additional land which slowly pushes out into the sea in the shape of a triangle until the point is reached where offshore currents become so strong that they rapidly sweep away whatever is deposited. Such formations are particularly common in the Mediterranean because of the weak tidal and wave conditions obtaining there (Philippson, *Das Mittelmeergebiet*, p. 70 ff.). The Nile Delta is a classic case. Its formation began in the Pleistocene Period (c. 500,000 B.C.) when the river met the sea in the vicinity of modern Cairo but as late as the Mousterian (c. 20,000 B.C.) it had only proceeded 90 kms. N. of that point. It then retreated to 82 kms. and then advanced to a point 11 kms. beyond the present limit before assuming its present position. In the last 5000 years there has been no significant addition (Ball, *Contributions*, p. 13 ff.; Bonneau, *La Crue du Nil*, p. 12 ff.).

H. is, therefore, perfectly correct in using the shape of the coastline as a *τεκμήριον* of the alluvial nature of the N. part of Egypt.

κογχύλιά τε φαινόμενα ἐπὶ τοῖσι ὄρεσι : Cf. Str., I, 3, 4 (C50); Plu., *DIO* 40 (*Mor* 367). *Τεκμήριον* 5. The western desert is riddled with marine fossils. Cretaceous rock walls in the Siwa, Bahariya, Kharga and Dakhla Oases are filled with the shells of sea-urchins and bivalves and in Um Shersher, S. of Kharga, corals and nautili (tower shells) abound (Hume, *Geology*, I, pp. 3, 65 ff.). Fossil shells also occur in vast quantities in Eocene limestones, marls and clays, by far the majority being nummulites of which some limestones are entirely made (Ball, *Contributions*, p. 22; Baedeker, *Egypt*^{7}, p. LXX). These deposits antedate the period when the Nile Valley was an arm of the sea (the Pliocene n. II, 10, 1) and are in no way proofs of the thesis that *τῶν ... ὀρέων ... τῶν ὑπὲρ Μέμφιν πόλιν κειμένων τὸ μεταξύ* was once a *κόλπος θαλάσσης*, though they are obviously evidence that the plateau in which the Nile Valley was formed had several times been submerged beneath the sea. The *κόλπος* is, however, evidenced by Pliocene fossils (corals, marine shells and sea-urchins) found in the Libyan Desert, Nile Valley and the E. Desert though they are relatively uncommon (Ball, op. cit., p. 26 ff.). It is perfectly possible that H. made his deduction from shells of the wrong period.

Similar conclusions were drawn from the presence of marine fossils on high ground before H. by Xenoph. (*KR* 187 ~ *DK* 21, A33, 5), possibly preceded by Anaximand. (*KR* p. 140), and also by Xanth. (*FgrH* 765, F.12) with both of whom H. has affinities in other respects (nn. II, 3, 5, 1). It is not unlikely that Hec. shared an interest in such fossils (Brown, *AJPh* 86 (1965), p. 60 ff.; in general Mieli, *Prearistotelici*,

I, pp. 54, 390 ff.; Freeman, *Pre-Socratic Philosophers*, pp. 89, 102; Gigon, *Der Ursprung der griechischen Philosophie*, p. 167; Capelle, *Die Vorsokratiker*, p. 191; Forbes, *Studies*, VII, Index, s.v. fossils).

καὶ ἅλμην ἐπανθέουσαν : *τεκμήριον* 6. Common salt is abundant in Egypt (Lucas-Harris, *AEMI*^{4} p. 268 ff.). In the desert it occurs in veins near the earth's surface and is dug out by the fellahîn for their personal needs (Blanckenhorn, *Handbuch der regionalen Geologie*, p. 206). H., however, is referring to surface incrustations which are plentiful. There are many salt marshes and pools, the best known being those in the Wadi Natrun where ten salt lakes are found which dry up almost entirely in summer leaving such rich salt deposits that, together with the salt in the surrounding soil, they can create the impression that the ground is covered with snow (Baedeker, op. cit., p. 32; Hume, op. cit., I, p. 161 ff.), a phenomenon also found in the vicinity of El Kab in U.E. (Hume, op. cit., p. 172). H.'s observation, therefore, leaves nothing to be desired but it hardly needs saying that, as a proof for his thesis, *ἅλμη ἐπανθέουσα ἐπὶ τοῖσι ὄρεσι* is worthless.

ὥστε καὶ τὰς πυραμίδας δηλέεσθαι : Presumably the Giza pyramids which will already have been showing signs of their age, though salt would not have been responsible for this to any marked degree. The statement is not, however, without some basis. "The capillary attraction of water up through the lower courses of limestone masonry and the subsequent crystallization of salt on the surface" is a well known factor in the destruction of Ancient Eg. monuments (*A General Introductory Guide to the Eg. Collections in the British Museum* (1964), p. 177 ff. Cf. Lucas, *ASAE* 25 (1925), p. 47 ff.; Traunecker, *Kêmi* 20 (1970), p. 195 ff.).

καὶ ψάμμον μοῦνον Αἰγύπτου ὄρος τοῦτο τὸ ὑπὲρ Μέμφιος ἔχον : *τεκμήριον* 7. II, 8, 2 (*ψάμμῳ κατειλυμένον*) proves that the *ὄρος* in question is the entire Libyan plateau (Sourdille, *La Durée*, p. 140, n. 4). Sand is, in fact, relatively rare on the Arabian Range but covers large parts of the W. desert (nn. II, 8; 12, 3). The slight exaggeration may be explained either as over-schematization or, preferably, H.'s tendency towards an impressionistic mode of description.

The process of thought is not perhaps immediately clear. H. means that the W. plateau, i.e. one of the shores of the hypothetical *κόλπος θαλάσσης*, was covered in sand whereas the valley was not. Therefore they must have a different origin. The obvious explanation seemed to be that the sand in question was the remnant of the beach of an ancient gulf which had been filled in by the river. The argument is, of course, unsound since desert sand does not have a marine origin.

πρὸς δὲ τῇ χώρῃ ... ὑπόπετρον ἐοῦσαν : *τεκμήριον* 8. The difference in soil between Egypt and surrounding countries and its value in proving H.'s thesis are beautifully observed.

τὴν Αἴγυπτον ... μελάγγαιόν τε καὶ καταρρηγνυμένην ... καὶ πρόχυσιν : The commonest Eg. name for Egypt was *Kmt* (*Wb* V, pp. 126, 7-18; 127, 1-20; 128, 1); Copt. ⲕⲏⲙⲉ (Crum, *CD* p. 110) "the Black Land". Mosséri (*BIE* 1 (1918-19), p. 155 ff.), followed by Hume (*Geology*, I, p. 174 ff.), divides the soil of Egypt into three main types :

1. Sandy (*ramlieh*).
2. Yellow (*safra*) which is $^3/_4$ sand and $^1/_4$ clay.
3. Black (*soda*) in which clay forms 50%.

It is the latter which forms nearly all of the alluvial plain of which H. is speaking. It is described by Ball (*Contributions*, p. 162 ff.) as a blackish-brown mud which has a mean thickness of 6.7 m. in the Assuan-Qena area rising to 9.8 m. in the Delta. Between Cairo and Assuan it has an average thickness of c. 8.3 m. When freshly deposited it was very soft, plastic and sticky but with the loss of moisture it contracted and hardened to form a tough, coherent earth. During the 6 months when the land lay fallow under the old basin system of irrigation it became deeply cracked (*καταρρηγνυμένην*) (Hurst, *The Nile*, p. 45 ff.).

ἐξ Αἰθιοπίης κατενηνειγμένην ὑπὸ τοῦ ποταμοῦ : The soil is provided by the decomposition of the volcanic rocks forming the higher portions of the Abyssinian Highlands. In general terms, the Blue Nile erodes the solid rocks themselves and provides the coarser material for Nile silt, the Atbara acts on matter already eroded, transporting finer material, while the White Nile contributes fine, flocculent, clayey and ferruginous matter (Hume, op. cit., p. 175 ff.).

τὴν Λιβύην ἴδμεν ἐρυθροτέρην τε γῆν καὶ ὑποψαμμοτέρην : In Eg. the desert, as distinct from the alluvial plain, is often called *Dšrt* "the Red Land" (*Wb* V, p. 494, 5-13). On the geography of the Libyan Desert vide nn. II, 8, 2; 12, 1.

τὴν δὲ ᾿Αραβίην : Since *᾿Αραβίη* is earlier described as *πρόσουρος* to Egypt (12, 2), H. clearly has in mind the eastern *ὄρος* between the Nile Valley and the Red Sea. His description fits very well (vide n. II, 8, 1).

Συρίην : 12,2 (*τῆς γὰρ ᾿Αραβίης τὰ παρὰ θάλασσαν Σύριοι νέμονται*) makes it clear that *Συρίη* is that part of *᾿Αραβίη* which is inhabited by *Σύριοι* (for the principle vide II, 17, 1) and which lies adjacent to the sea. They must be the *Σύριοι* mentioned III, 5, 2 as dwelling between L. Serbonis and Ienisus which was a journey in adverse conditions of 3 days and that in turn means that they could hardly be anything but the Beduin tribes living in the desert to the E. of the Delta. H. is correct in regarding this area as geologically akin to the territory between the Nile Valley and the Red Sea (vide Sourdille, *La Durée*, p. 118).

13. ἔλεγον δὲ καὶ τόδε μοι μέγα τεκμήριον : *τεκμήριον* 9. Unlike the others this proof is based on *ἀκοή* (vide n. II, 5, 1).

οἱ ἱρέες : Possibly priests of some eminence in this case (vide Introduction, p. 112 ff.). Note that H. has here brought us back to his starting point; for the discussion began with the priests who gave him the account of Menes' achievements in II, 4, 3—a good example of ring composition.

ὡς ἐπὶ Μοίριος βασιλέος : Amenemḥēt III of the XIIth Dynasty (Lloyd, *JEA* 56 (1970), p. 91).

ὅκως ἔλθοι ... τὴν ἔνερθε Μέμφιος : This information must be discussed together with *νῦν δέ, εἰ μὴ ... οὐκ ὑπερβαίνει ἐς τὴν χώρην* infra. Two points are at once obvious :

1. H.'s 2 figures do not derive from the same source. The Moeris height was obtained from the priests, the other from an unspecified source which is clearly different. Otherwise it would be given in *oratio obliqua.*

2. While the eight cubit figure (i.e. c. 14 ft.) refers to *Αἴγυπτον τὴν ἔνερθε Μέμφιος* there is no indication that the 15-16 cubits figure refers to this same area.

Evidence on the height of the inundation in antiquity is somewhat confusing. Tabulating information provided by Kees (*Ancient Egypt*, p. 50 ff.) we obtain the following picture :

Source	*Elephantine*	*Roda*	*Delta*
Egyptian			
Palermo Stone[1]		Average = c.4 cubits (c.7ft.). 8 cub. 3 fing. (over 14ft.) flood.	
Senwosret I[2]	21 cub. $3^1/_8$ palms (c. 39ft.).	12 cub. 3 palms 3 fing. (c. $21^1/_2$ ft.).	6 cub. 3 palms 3 fing.(c. 11ft.).
Edfu Insc.[3]	24 cub. 3 palms 1 fing. (c. 42ft.).		
Famine Stele[4]	28 cub. (c. 49ft.).		7 cub. (c. $12^1/_4$ft.).
Classical			
PSI V, 488		12 cub. (c. 21ft.) max. but 259 & 258 B.C. 10 cub. 3 palms, 1 fing. and 10 cub. 6 palms, $2^2/_8$ fing.	
Plu., *DIO* 43	28 cub. (c. 49ft.).	14 cub. ($24^1/_2$ft.).	7 cub. (c. $12^1/_4$ft.).
Aristid., *Or* 36, 115	28 cub. (c. 49ft.).		7 cub. (c. $12^1/_4$ft.).
Str., XVII, 1, 3 (C788)		14 cub. necessary before Petronius, 12 in his time.	
Plin., *HN* V, 58		14, Nile of *Hilaritas*. 16, Nile of *Deliciae*.	

[1] Schäfer, *Bruchstück*, r. 3, n. 3-4.

[2] Lacau-Chevrier, *Une Chapelle de Sésostris Ier*, p. 238.

[3] Borchardt, *Nilmesser*, p. 54.

[4] Barguet, *La Stèle de la Famine*, p. 19.

Archaeology

In the time of Vespasian we find statue groups representing the Nile with 16 children (Bonneau, *La Crue du Nil*, p. 337 ff.).

Modern Figures

Lyons (ap Baedeker, *Egypt*^{7}, p. LXV). 23 ft. at Assuan, 16 ft. at Cairo.

Barois (ap Bonneau, op. cit., p. 23). 11 m. = c. 36 ft. at Elephantine, 7.5 m. = c. 25 ft. at Cairo and 4 m. = c. 13 ft. at Sais. It burst its banks, however, much earlier—at 9 m. = 30 ft., 6 m. = c. 20 ft. and $3^{1}/_{2}$ m. = c. $11^{1}/_{2}$ ft. respectively.

Besançon (*L'Homme et le Nil*, p. 70 ff.). 8-10 m. = c. 26-33 ft. at Assuan, the maximum for a good Nile being 9.20 m. = c. $33^{1}/_{3}$ ft. 6-8 m. = c. 20-26 ft. at Cairo.

Several deductions follow from this information :

1. Since figures for the Delta given in the table range between 6 and 7 cubits, H.'s 8 cubit figure for *Αἴγυπτον τὴν ἔνερθε Μέμφιος* must refer to measurements taken somewhere N. of a Nilometer at or near Roda.

2. The figures nearest H.'s 15 and 16 cubits (i.e. c. $26^{1}/_{4}$-28 ft.) are those for a latitude at or near Roda. Other classical sources give heights of 14 and 16 cubits for this area.

3. Although H. regards his figures as *minima*, the other evidence shows that they would be high floods in the areas in question, in fact ideal floods.

4. The figures of Barois are generally compatible with all ancient evidence except *PSI* V, 488 (which regards 12 cubits i.e. 21 ft. as the maximum likely) and the Palermo Stone (where the average is inexplicably low).

The following deductions about H.'s figures seem inevitable :

1. He has unwittingly used measurements referring to different parts of the country to prove his point, 8 cubits deriving from the Delta and 15-16 from Roda. The information is, therefore, useless for the thesis that N. Egypt was *ἐπίκτητος γῆ*.

2. H. had a grossly exaggerated concept of the speed at which N. Egypt was built up by the Nile. This helps to explain II, 4, 3 and 15, 2.

3. Point 3 proves that H. or his source was given the figures for ideal floods in the areas in question.

4. The general similarity between H.'s figures and those of Barois shows that the information to which he had access directly or indirectly was fundamentally sound.

We conclude that H. had, at some time or another, been told by the priests that the Nile flooded Egypt satisfactorily at 8 cubits in the time of Moeris. The fact that the figure refers to the Delta suggests that the information was obtained in that quarter (Sais?). On some other occasion, possibly in Memphis, he was given the height regarded as ideal in that area in his own time. This information was in both cases based on good knowledge of Nilometer readings but was then mistakenly used by H., under the influence of his knowledge of sedimentation, to prove a large rise in the level of the land between Moeris and his own time. The identifiable confusion between *minima* and ideal (vide supra 3) increases our confidence in postulating such a mistake.

Bibliography : Palanque, *Le Nil à l'Époque Pharaonique*, p. 39 ff.; Borchardt, *Nilmesser*, passim; id., *ZÄS* 72 (1936), p. 137 ff.; id., *SPAW* 1934, p. 194 ff.; Popper, *The Cairo Nilometer*; Drioton, *BIE* 34 (1953), p. 291 ff.; Engreen, *M & H* 1 (1943), p. 3 ff.; Lyons, *The Physiography of the Nile River and its Basin*, p. 289 ff.; id., ap Baedeker, *Egypt*^{7}, p. LXV; Willcocks, *Egyptian Irrigation*, p. 8 ff.; Toussoun, *MIE* 8 (1925) p. 79 ff.; 9 (1925), p. 265 ff.; Hurst, *The Nile*, p. 258 ff.; Kees, *Ancient Egypt*, p. 50 ff.; Lacau-Chevrier, *Une Chapelle de Sésostris I*^{er} *à Karnak*, p. 238 ff.; Barguet, *La Stèle de la Famine*, p. 19; Hermann, *ZÄS* 85 (1960), p. 35 ff.; Besançon, *L'Homme et le Nil*, p. 70 ff.; Bonneau, *La Crue du Nil*, p. 20 ff.; Gwyn Griffiths, *De Iside et Osiride*, p. 461 ff.

καὶ Μοίρι οὔκω ἦν ... ἐγὼ ἤκουον : Amenemḥēt III ruled c. 1842-1797 B.C. i.e. 500 years before the data given by H. For the causes of H.'s chronological confusion vide Introduction, p. 188 ff.

Αἰγυπτίων οἱ ἔνερθε τῆς λίμνης τῆς Μοίριος οἰκέοντες : i.e. those living in the part of Egypt which the priests and Hec. regarded as *δῶρον τοῦ ποταμοῦ* (vide nn. II, 4, 3; 5, 1). H. appears to forget that he has made the alluvium begin at 3 days' journey south of that (II, 5, 1; cf. II, 14, 1). Is this a "ghost" (vide n. II, 33) or does he consider the rate of deposition N. of the Lake of Moeris to be faster?

ἢν οὕτω ἡ χώρη αὕτη ... πείσεσθαι : Fallacious. The level of the alluvium rose in antiquity at the rate of $3^{1}/_{2}$'' per century but this was balanced by a corresponding rise in the river bed (Ball, *Contributions*, p. 175 ff.).

πυνθανόμενοι γὰρ ... ὅτι μὴ ἐκ τοῦ Διὸς μοῦνον : Cf. also II, 14, 1 with n. ad loc. The Egs. undoubtedly regarded themselves as highly privileged in that, unlike other peoples, they did not have to depend on rain (Sauneron, *BIFAO* 51 (1952), p. 41 ff.).

14. εἴ σφι θέλοι ... ἐς ὕψος αὐξάνεσθαι : Vide II, 13, 1-2 with n. ad loc.

ἡ χώρη ἡ ἔνερθε Μέμφιος (αὕτη γάρ ἐστι ἡ αὐξανομένη) : H. seems to be unusually confused. In II, 13, 2 it is the land N. of the Lake of Moeris which is said to be on the increase and that statement in turn appears to contradict II, 5, 1 (vide n. ad loc.).

εἰ μήτε γε ὕσεταί σφι ἡ χώρη ... ἐς τὰς ἀρούρας ὑπερβαίνειν : Incorrect. Egypt does have a small average annual rainfall of about 1 cm. over the whole country. The Mediterranean coast gets 20 cms., Alexandria 19, Cairo 3, the Fayyûm less than 1 and Assiut $^1/_2$ while Assuan gets practically none at all (Willcocks, *Egyptian Irrigation*, p. 346 ff., Appendix F; Baedeker, *Egypt*^{7}, p. LXXVII; Ball, *Contributions*, p. 2 ff.; Kees, *Ancient Egypt*, pp. 22, 47). It is, therefore, useless for agricultural purposes and was often regarded as a catastrophe or at least a bad omen (H., III, 20; Brugsch, *ZÄS* 12 (1874), p. 140; 20 (1882), pp. 73, 77; cf. for its nuisance value Černý, *LRL*, p. 18, 14 ~ Wente, *Late Ramesside Letters*, p. 38). It is the Nile upon which not only the prosperity but the very existence of Egypt depends (Baedeker, op. cit., p. LXIV). The paradox of rainlessness combined with extreme fertility never ceased to amaze the ancients (Sauneron, *BIFAO* 51 (1952), p. 41 ff.; cf. Introduction, p. 141 ff.).

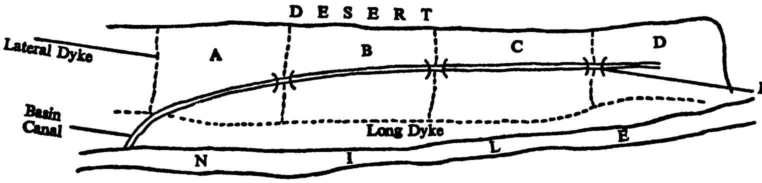
ἦ γὰρ δὴ νῦν γε ... οὕτω κομίζεται : Cf. D.S. I, 36, though H. is referring only to the inhabitants of the Delta, while D.S. speaks of Egypt as a whole. Two factors contribute to this false impression :

(a) Unlike Str. (XVII, 1, 3 (C788)) H. fails to recognize the back-breaking toil required by the irrigation system.
(b) The notion *οὔτε ἀρότρῳ ... περὶ λήιον πονέουσι.*

(a) Broadly speaking there were two types of land :

  (1) Land reached by the inundation (Ar. *Rei*).
  (2) Land watered only or predominantly by artificial means (Ar. *Sharaki*).

1. *Rei* land was irrigated by the basin system which, in the simplest terms, involved building a complex of dykes, one parallel to the river and as close to it as possible and several others at right angles to it, forming a series of contiguous basins which in modern times could vary between 500 and 48,000 acres. Through these the basin canal from the Nile would run, its head blocked by an earthen bank. When the Nile had risen to a satisfactory level, this bank was cut and water was admitted into the canal which flooded the basins in succession. Once D had been flooded, the sluice gates to it would be shut, C would then be filled and so on until all the basins were adequately flooded to a depth of 0.5-2.0 m. The water was allowed to stand for c. 40 days and was then let out through special exits, beginning in modern times c. 15th October in U.E. and progressively later as one moved N. where it might not be let out until c. 11th November. The proper working of such a system obviously demanded the building and maintenance of large, solid dykes, the construction of reservoirs, and the excavation and cleaning of canals which were subject to blockage through weeds and sedimentation. Furthermore the banks and sluice gates had to be properly maintained and the waters carefully regulated, e.g. basins could get too full and require tapping.



2. *Sharaki* land required artificial irrigation which demanded yet further dykes and canals. Often water was arduously carried in jars suspended from the peasants' shoulders (Newberry, *El Bersheh*, I, pl. XXVI). Whether the shadûf was used for agricultural purposes is not known.

Thus whatever type of land was involved, cultivation required unrelenting toil and vigilance to get and keep the fields watered, not to speak of other chores such as sowing, reaping, threshing, winnowing etc. and to accomplish all this the Eg. farmer had at his disposal nought but human muscle and the most primitive of tools. His lot was not enviable and was admirably summarized by Schweinfurth in his description of the modern fellah (ap Baedeker, op. cit., p. LIV)

> "... his work is more continuous than that of the peasant of more northern countries. He enjoys no period of repose during the winter, and the whole of his spare time is occupied in drawing water for the irrigation of the land".

Bibliography : Baedeker, *Egypt*^{7}, p. LXXI; Willcocks, *Egyptian Irrigation*, p. 36 ff.; Hartmann, *L'Agriculture dans l'Ancienne Égypte*, p. 87 ff.; Kees, *Ägypten*, p. 34 ff.; Hurst, *The Nile*, p. 38 ff.; Besançon, *L'Homme et le Nil*, p. 85 ff.; Forbes, *Studies*, II, p. 22 ff.; Kees, *Ancient Egypt*, p. 52 ff.; Sigerist, *History of Medicine*, I, p. 253 ff.; Bonneau, *La Crue du Nil*, pp. 53 ff., 114 ff.

(b) *οὔτε ἀρότρῳ ἀναρρηγνύντες ... περὶ λήιον πονέουσι* : At first sight startling but the key lies in the difference of technique followed by Gks. and the inhabitants of the Delta. To a Gk. sowing involved three actions :

(1) Ploughing to break up the soil to receive the seed.
(2) Broadcasting.
(3) Harrowing i.e. covering up the seed.

More often than not the Eg. could dispense with the first, presumably only finding it necessary when the emergent land had become hardened by the sun or inadequately soaked by the Nile. Thus, his normal concerns were :

(a) Broadcasting.
(b) Covering the grains.

(b) could be executed in three different ways :

(1) With a plough.
(2) With a hoe.
(3) By means of a herd of animals just as a palm trunk pulled by 2 oxen was used in modern times (Girard, *Description de l'Égypte*, XVII, p. 25).

The choice was determined by the character of the soil and its proximity to the river. Under normal conditions the seed was broadcast and then covered by ploughing. If the land was extremely humid, animals were used to tread in the grain. If, however, it had not been long covered by the inundation the hoe was employed. The notoriously water-logged character of the land N. of Memphis would inevitably lead to the large scale use of the second method whereas the other two would tend to predominate further S. This means that in the Gk. sense in the area in question there was no ploughing or hoeing.

H.'s misunderstanding is thus easily explained. H., or his source, was ignorant of the colossal labour required by the irrigation system and was immensely impressed by the fact that in the Delta ploughing was unnecessary. To a people who sometimes had to plough 3 times before sowing (*Il* XVIII, 541 ff.) that was no mean thing. It is, then, hardly surprising that he should have regarded the inhabitants of the Delta as uniquely fortunate farmers.

ἐσβάλλει ἐς αὐτὴν ὗς : Plin.'s nervousness (*HN* XVIII, 168) is unjustified. The use of pigs for this purpose is exemplified in the N.K. (Wreszinski, *Atlas*, I, pl. 97b; Tylor, *Renni*, pl. II) and in the Hellenistic Period (Schnebel, *Die Landwirtschaft im hellenistischen Ägypten*, I, p. 174). Sheep were normally used in earlier times (O.K. L*D* II, pl. 56, 106; Davies, *Sheikh-Said*, pl. VIII; M.K. Newberry, *El Bersheh*, I, pl. XXV; N.K. Rosellini, *Mon. Civ.*, pl. XXXII), though goats were also employed in the O.K. (L*D* II, pl. 112).

ἀποδινήσας δὲ ... οὕτω κομίζεται : There is no known representation of pigs in this rôle. Cattle are the most commonly employed animals from as early as the VIth Dyn. though asses were also used in the O.K. and M.K. (Hartmann, op. cit., p. 134 ff.; Klebs, *AR* p. 50 ff.; id., *MR* p. 72 ff.; id. *NR* p. 12). The threshing floor was usually an area of beaten earth. Upon this a thick layer of grain was spread and animals then let loose to trample upon it encouraged by attendants brandishing whips and assisted by others equipped with forks who periodically turned the grain over. This method was also used in S.W. Asia (Curwen, *Plough and Pasture*, p. 119).

Bibliography : Hartmann, *L'Agriculture dans l'Ancienne Égypte*, p. 96 ff.; Montet, *La Vie Privée*, p. 183 ff.; Erman-Ranke, *Ägypten und ägyptisches Leben*, p. 513 ff.; Klebs, *AR* p. 45 ff.; id., *MR* p. 70 ff.; id., *NR* I, p. 1 ff.; Kees, *Ägypten*, p. 27 ff.; Curwen, *Plough and Pasture*, pp. 63, 108 ff.; Montet, *Everyday Life*, p. 108 ff.; Singer-Holmyard-Hall, *History of Technology*, I, p. 539 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, pp. 204 ff., 274.

15-18. Definition of Egypt. H. discusses the problem in two parts in a fashion analogous to the discussion of the inundation (Introductory n. II, 19-26) :

1. He states and demolishes what was probably the current view, i.e. that of the Ionians (15-16).
2. He describes and justifies his own opinion which is also that of *οἱ Ἕλληνες* (17-18).

In studying the problem he raises several key issues in Gk. geography

(1) *Erdteillehre* (II, 16).
(2) *Wassergrenze* (l.c.).
(3) Hydrography (II, 16-17).

and shows himself therein a keen critic of the Ionian system (cf. n. II, 23; IV, 8, 2; 36, 2). In fact H. is the *Hauptzeuge* of a general movement of revolt against Ionian Geography which had several causes (Berger, *Geschichte der wissenschaftlichen Erdkunde*, pp. 5, 87; Gisinger, *RE* SB IV, 567ff.) :

1. There were growing (and often ill-founded) doubts about Ionian information on the W. (Berger, op. cit., p. 51 ff.). These were due to the sealing-off of the area through the growth of Carthaginian and Etruscan opposition to Gk. enterprise in that quarter (Heidel, *The Frame of the Ancient Greek Maps*, p. 38; Gisinger, l.c.).
2. Knowledge of Asia was rapidly increasing through contact with the Persian Empire so that the frontiers of the earth were being pushed ever further away (Berger, op. cit., pp. 55 ff., 163 ff.; Gisinger, l.c.).
3. Ionian climatic doctrines were being invalidated by the increase of geographical knowledge (Berger, op. cit., p. 125 ff.).

15. **εἰ ὦν βουλόμεθα γνώμῃσι τῇσι Ἰώνων χρᾶσθαι ... ἑξακισχίλιοι** : The Ionian view is stated, viz. *Αἴγυπτος* is simply the Delta with its angles at the Watchtower of Perseus, the Pelusian Pickling Factories and Cercasorus. This opinion is paralleled in A., *Pr* 813 and was undoubtedly shared by Hec. (Jacoby, *RE* VII, 2678 ff.; Introduction, p. 130 ff.). H. then proceeds to *Objection 1.*

A *reductio ad absurdum.* The Egs. are named after *Αἴγυπτος* (unstated premise, cf. II, 17, 1). If *Αἴγυπτος* = the Delta it is recent. Therefore, the *Αἰγύπτιοι* are recent. Therefore, they would not lay claim to great antiquity. They do make such a claim, however (II, 2). Therefore, *Αἴγυπτος* must be a place of great age. It was, in fact, originally only U.E. and the *Αἰγύπτιοι* from there brought the designation with them when they moved down into the growing Delta.

ἀπὸ Περσέος καλεομένης σκοπιῆς : Cf. E., *Hel* 769; Str., XVII, 1, 18 (C801). Where was it? The data are :

1. H. places it on the coast near the Canopic Branch.
2. Str. locates it E. of the Bolbitinic *στόμα* beyond *Ἄγνου κέρας* which is presumably the mouth of the modern Rosetta Branch.

Since Str.'s authority on matters geographical is greater than that of H., we must accept his location. Does this mean that the Ionians began the Delta at the Bolbitinic *στόμα*? Such a view would be an impossibly arbitrary application of the *Wassergrenze* theory and H. would not have been slow to point it out. We must assume that they started the Delta at the Canopic Branch and that H. has mistakenly placed the *Περσέος σκοπιή* near it (so also Sourdille, *La Durée*, p. 58 ff.; Ball, *Egypt in the Classical Geographers*, pp. 18, 65 n.*).

On the name it should be noted that Perseus had close affinities with Egypt (II, 91; Lloyd, *JHS* 89 (1969), p. 81 ff.) and also that Sauneron has suggested that the *σκοπιή* in question was connected with him because the Eg. word *wrš* "watcher" (*Wb* I, p. 335, 10-16), with the addition of the definite article *p3* = *P3 wrš*, would have sounded similar to the Gk. *Περσεύς* (*BIFAO* 64 (1966), p. 190 ff.).

Ταριχηίων τῶν Πηλουσιακῶν : Pelusium = El Farama 40 kms. S.E. of Port Said (Ball, *Egypt in the Classical Geographers*, p. 18; Gardiner, *AEO* II, p. 156*; Kees, *RE* XIX, 407 ff.). *Ταριχῆται* are also known at Canopus (II, 113, 1) and the Mendesian *στόμα* (St. Byz., s.v. *Μένδης* &

Ταριχέαι). The Delta abounded in fish (n. 92-3) and those which were not immediately to be eaten were either gutted and dried in the sun or pickled in salt. In Pharaonic times the pickling industry was probably highly prosperous; for it even exported its products to Syria (Kees, *Ägypten*, pp. 61, 119; see also n. II, 77, 4). In the Gk. world this industry was particularly associated with the Black Sea area where pickling reservoirs have actually been excavated at Tiritaca (S. Russia) (Boardman, *The Greeks Overseas*, p. 252).

τῇ δὴ τεσσεράκοντά εἰσι σχοῖνοι : 40 *σχοῖνοι* = 2400 stades (II, 6, 3). Ps. Scyl. (106 ~ *GGM* I, p. 81) gives 2,300 stades, D.S. (I, 34) and Str. (XVII, 1, 6 (C791)), c. 1300, Plin. (*HN* V, 48) 170 *millia* = 1360 stades. Wiedemann (*Philologus* 46 (1888), p. 173) gives the actual distance as c. 300 kms. H. and Ps. Scyl. are, therefore, badly wrong. Explanation as for II, 6.

Κερκασώρου πόλιος : Cf. II, 17, 97; Ephor., *FgrH* 70, F. 86; Str., XVII, 1, 30 (C806); Mela, I, 51. Probably El-Warrâq N.W. of Cairo and W. of the S. tip of Geziret Mohammed. Ball believed that it was at this tip that the Nile divided into the Canopic, Sebennytic and Pelusiac Branches.

Bibliography : Kees, *RE* XI, 290; Ball, *Egypt in the Classical Geographers*, pp. 14, 17, 25, 63, 71.

ἐς Κάνωβον : Eg. *P*(*r*) *Gw3tl* (Spiegelberg, *Priesterdekrete*, p. 221, no. 482; *Urk* II, 127, 143; Gauthier, *DG* V, p. 215 ff.; Gardiner, *AEO* II, p. 162*; Montet, *DG* I, p. 72). There is also a place name *Gnp* mentioned once in connection with the 7th Nome (Mariette, *Dendérah*, IV, pl. 75, 11; v. Bissing, *ZÄS* 72 (1936), p. 79) and believed by Brugsch (*DG* p. 849) & Kees (*RE* X, 1869) to be the Eg. rendering of the Gk. name. Gardiner (l.c.) is doubtful but perhaps needlessly so. The name *Κάνωβος* was derived as early as the time of Hec. (*FgrH* I, F. 308-9 with p. 369) from *Κάνωβος* of Amyclae, steersman of Menelaus. On the journey home from Troy the latter landed in Egypt (cf. II, 112 ff.) and there K. insulted Theonoe, daughter of the Eg. king Proteus. For this offence he was bitten by a snake, died and was buried in the place later called *Κάνωβος*.

The city lay W. of Abukir 22 kms. from Alexandria (Str., XVII, 1, 17

(C801); Amm., XXII, 16), where ruins may still be seen (Breccia, *Monuments de l'Égypte Gréco-Romaine*, I, p. 9 ff.; *PM* IV, p. 2), and gave its name to the Canopic Branch of the Nile, also called the Herakleote or Naucratite Branch. Its rise to importance was late. *Κάνωβος* is mentioned by Hec., apparently as an island off the Canopic *στόμα* (*FgrH* l.c.), but the first reference to a city occurs in A. (*Pr* 846). V. Bissing considers the foundation to date only to the 6th Century (*BSAA* 24 (1929), p. 54). Later it became a settlement of considerable importance and the chief town of the 7th (Menelaite) Nome. It was hit hard by the foundation of Alexandria, with which it was connected by a canal, but retained its importance as a cult centre of Osiris (Str., XVII, 1, 17 (C801); Plu., *DIO* 27 (*Mor* 361)) until the destruction of the temple by the Emperor Theodosius. The hero Canopus also had a cult there and was given as his wife a form of Isis called Menuthis who had a temple outside the city (Weber, *Drei Untersuchungen z. äg.-griech. Rel.*, p. 41).

Bibliography : Hommel, *Ethnologie*, pp. 912, n. 4, 915, n. 1; Bonnet, *RÄRG* p. 368 ff.; Tschudin, *Artemis Lexikon*, 1485; Helck, *KP* III, 108.

τὰ δὲ ἄλλα λεγόντων ... τὰ δὲ 'Αραβίης εἶναι : Vide n. II, 16.

τὰ δ'ὦν πάλαι αἱ Θῆβαι Αἴγυπτος ἐκαλέετο : "Be that as it may, in the old days *αἱ Θῆβαι* was called *Αἴγυπτος*." *Pace* Sethe (*Dodekaschoinos*, p. 8) *αἱ Θῆβαι* is here obviously identical with the Thebaid since H. must mean the land which he believes to lie S. of the alluvium i.e. everything S. of 3 days' journey from the L. of Moeris (II, 5, 1 with n. ad loc.; cf. Sourdille, *La Durée*, p. 161 ff.). The statement is probably mere inference from what precedes. If the *Αἰγύπτιοι* have existed time out of mind, then *Αἴγυπτος* must have done also and the only place it could be was the Thebaid. It need hardly be said that this notion is quite incorrect; for *Αἴγυπτος* is simply the Gk. version of the name for a part of Memphis (vide n. II, 1, 2).

τῆς τὸ περίμετρον στάδιοί εἰσι εἴκοσι καὶ ἑκατὸν καὶ ἑξακισχίλιοι : 6120 stades = c. 1212 kms. = c. 756 miles (*κατὰ* Sethe, l.c.). According to II, 5, 1 *αἱ Θῆβαι* ought to begin at the commencement of the Baḥr Yûsuf i.e. Deirut and ought to extend to Assuan. This distance amounts to c. 380 miles. Since the *περίμετρον* should be twice that + twice the width of the valley, we obtain a figure of between 760-800 miles—surprisingly close to that quoted by H.

16. εἰ ὦν ἡμεῖς ὀρθῶς περὶ αὐτῶν γινώσκομεν ... γίνοιτ' ἄν : *Objection 2.*
The Ionians claim that the earth is made up of 3 continents separated by water. According to this view the land W. of the Nile is Libya, the land E. Asia. Since, however, the river splits at Cercasorus there is a large area as it were in the middle of the Nile i.e. the Delta. This means that there must be four continents, not three, and the Ionians stand convicted of inconsistency.

The argument contains two problems :

1. *Εἰ ὀρθή ἐστι ἡ γνώμη τῶν Ἰώνων.* This embodies an error in logic which has caused much discussion. "The insoluble difficulty is, that Herodotus' objection is valid *whether or not* the Delta be equated with Egypt. Yet he himself apparently thinks it valid *only* on the opinion of the 'Ionians' that Delta = Egypt. That, in the context, can alone be the meaning of the initial hypothesis : *εἰ ὀρθή ἐστι ἡ γνώμη τῶν Ἰώνων*" (Powell, *CQ* 29 (1935), p. 75). Attempts to solve the difficulty by textual means (e.g. Gomperz, *RhM* 63 (1908), p. 624 ff.) are quite unsatisfactory. Powell is surely correct in explaining the difficulty simply as muddled thinking on H.'s part.

2. Since both *οἱ Ἴωνες* and H. (II, 17) regard the Nile as the dividing line between Europe and Asia, what exactly is the difference between their opinions? Berger (*Geschichte der wissenschaftlichen Erdkunde*, p. 88) argued that H. has completely misunderstood and misrepresented the Ionian doctrine. Honigmann believed (*RE* XIII, 1, 159) that the Ionians considered the Delta simply as an island which, like other islands, they either left out of account in their *Erdteillehre* or added to one or the other continent. Berger's remedy is too desperate to be accepted as anything but a last resort. As for Honigmann's, it fails because it must mean that the Ionians had pronounced on the status of the Delta and thereby covered themselves whereas H. surely implies that they had done nothing of the sort and left themselves wide open to attack. The solution is very simple. In Anaximand.'s geometrically dominated system

Europe and Asia were neatly divided by the Phasis. A later enquirer, probably Hec. in his search for *διακρίβωσις* (Introduction, p. 129), felt obliged to separate Libya from Asia and took, as his dividing line, the Nile. In accordance with the schematized character of Ionian geography, this doctrine was stated in quite general terms without any attempt at drawing its full logical consequences, i.e. it failed to take into account the division of the Nile at the apex of the Delta which, strictly speaking, turned the Delta either into a fourth continent or at least a *νῆσος*. It is this oversight on which H. has so joyfully and maliciously pounced.

Three issues of importance in Ionian geography are raised :

1. *Erdteillehre.* Homer had no theory of continents (Str., XII, 3, 27 (C553-4)) but in Ionia two views are known :

(a) There were two continents—*Εὐρώπη* and *'Ασίη* (Anaximand. (Introduction, p. 126 ff.); Hp., *De Aer* passim).
(b) There were three—*Εὐρώπη*, *'Ασίη* and *Λιβύη* (H., II, 16; IV, 45). This doctrine is mentioned by Pi. (*P* IX, 5 ff.) and was later championed by Eudox. (Gisinger, *Die Erdbeschreibung des Eudoxus*, 14 ff.) and Plb. (III, 37). It probably originated with Hec. as one of his improvements on Anaximand.'s map but, at all events, he certainly accepted it, dividing the old continent at the Nile to make a third, if less impressive, continent of *Λιβύη* (Jacoby, *RE* VII, 2678 ff., 2703 ff.; id., *FgrH* I, *Kommentar*, p. 366 ff.; Introduction, p. 129).

Bibliography : Berger, *Geschichte der wissenschaftlichen Erdkunde*, pp. 82 ff., 87 ff.; Gisinger, *RE* SB IV, 538 ff.; Heidel, *The Frame of the Ancient Greek Maps*, p. 11 ff.; Thomson, *History of Ancient Geography*, pp. 59, 66, etc.; Ninck, *Die Entdeckung von Europa*, Index, s.v. Erdteile, Grenzen.

2. *Wassergrenze.* Whatever view was taken on the continents, the dividing line was almost invariably water. This concept was based originally on the notion that some at least of the great rivers debouching into the inland sea ran right across the earth to communicate with Ocean thereby cutting the land mass into 2 or 3 huge islands. According to H. (IV, 45) *'Ασίη* and *Λιβύη* were unanimously divided by the Nile but there was some difference of opinion on the exact line of demarcation

between *Εὐρώπη* and *Ἀσίη*—the Phasis, Tanais or *Πορθμήια τὰ Κιμμέρια* all being candidates. Hec. probably took the Phasis (Jacoby, *RE* VII, 2704) as was general in the 6th Century (A., F. 191 (N.[2]); cf. E., *Andr* 650 ff.; Pl., *Phd* 109b), though there is good evidence (F. 209-16) that he had confused the Phasis with the Hypanis which enjoyed favour in certain quarters as the dividing line (vide Vibius Sequester, *GLM* p. 148). The Phasis theory had, however, a crucial flaw in that it was based on the twin convictions that the river communicated with the Caspian Sea and that the latter was a gulf of Ocean. With the discovery that the Caspian was nothing but an inland sea the Tanais theory must quickly have gained ground and in later times had become general (Plb., III, 37; Str., I, 4, 7 (C65); XI, 2, 1 (C492); Gisinger, op. cit., 553 ff.; Ninck, l.c.). With the rejection of the concept of Oceanus (n. II, 21), we should have expected the abandonment of this version of the *Wassergrenze* principle since the rivers could no longer be said to separate the continents completely but it continued to hold the field throughout antiquity against all other contenders (Isthmi and Mathematical Lines) to be used by Ptol. (*Geog* II, 1, 5), last of the great classical geographers (Berger, op. cit., p. 91 ff.; v. Scheliha, *Die Wassergrenze*, p. 34 ff.).

3. *Hydrography.* The persistence of the theory just discussed is, in a large measure, due to the obsessive interest which Gks. of all periods showed in water. The first thing which they tended to consider about a place was its rivers and these figured prominently in their maps (H., V, 49). Hec. was no exception (Jacoby, *FgrH* I, F. 102 with *Kommentar*). Like H. (IV, 47 ff.) he devoted a great deal of attention to the complex river system of Scythia and probably contributed much to his successor on the subject (Jacoby, op. cit., F. 184-190 with *Kommentar*). H. himself describes many a stream (e.g. VI, 76; VII, 30) and, as with others, great rivers such as the Nile, Ister, Phasis and Eridanus became major subjects of research. To the Nile, doubtless often following in Hec.'s footsteps, he devoted much time, attempting to establish its course (II, 29-34), the number of its mouths (II, 17, 4-6), where it rises (II, 28) and the reasons for the flood (II, 19-26). The interest in deltas (nn. II, 4, 3-13) belongs to precisely the same context. This Gk. obsession with matters hydrographic does not, however, rest entirely on scientific interest. It also has religious and philosophical grounds. River gods abound in Greece and

Acheloos was widely worshipped, while amongst the philosophers water was frequently regarded as a creative principle (v. Scheliha, op. cit. p. 18 ff.).

Bibliography : Berger, *Geschichte der wissenschaftlichen Erdkunde*, pp. 93, 131, 157 ff.; Gisinger, *RE* SB IV, 565 ff.; Thomson, *History of Ancient Geography*, p. 103 ff.; Ninck, *Die Entdeckung von Europa*, p. 90 ff.; v. Scheliha, *Die Wassergrenze*, p. 38 ff.

17. καὶ τὴν μὲν 'Ιώνων γνώμην ἀπίεμεν ... στόματά ἐστι ἀλλ'ὀρυκτά : Here stage 2 of the discussion begins i.e. the statement and justification of H.'s own opinion. For him Egypt begins at the First Cataract and is divided by the Nile from Elephantine to the sea into a Libyan half and an Asiatic half. In the Delta it is the Sebennytic *στόμα* which is taken as the dividing line, $^{1}/_{2}$ of the Delta belonging to one continent, $^{1}/_{2}$ to the other.

ἡμεῖς δὲ ... ὑπὸ 'Ασσυρίων : *Proof 1. Κατ'ἀναλογίαν.* Egypt ought to be the land inhabited by *Αἰγύπτιοι* just as Cilicia is the land inhabited by the Cilicians and Assyria the land of the Assyrians.

ὁ γὰρ δὴ Νεῖλος ... ἀλλ'ὀρυκτά : The course of the Nile, in particular the course of the branches in the Delta, was a major concern of Gk. hydrography (n. II, 16). Unfortunately, despite many discussions in classical and Arabic literature as well as careful modern studies of Delta terrain (all collected and discussed by Toussoun, *MSAA* 1922; *MIE* 8-9 (1925)), the information available is quite inadequate for charting precisely the courses of the branches in H.'s time since both number and position clearly varied from date to date. The most authoritative attempt at a reconstruction is that of Ball (*Egypt in the Classical Geographers*, p. 22 ff.).

H.'s description is unique in that, while other classical writers regard the Nile as *ἑπτάστομος* (Ps. Scyl., 106 ~ *GGM* I, p. 80; D.S., I, 33, 7; Str., XVII, 1, 18 (C801); Mela, I, 51; Ptol., *Geog* IV, 5, 10; cf. Plin., *HN* V, 64), he refers to it (mistakenly? Vide n. II, 17, 6) as *πεντάστομος*, insisting that the Bolbitinic and Bucolic *στόματα* are *ὀρυκτά*, not natural branches. It is likely that Hec. was a *ἑπτάστομος* adherent and that it is he whom H. has in his sights :

1. Ps. Scyl. (l.c.) regards the Nile as *ἑπτάστομος* and this suggests that Hec. did also (vide Introduction, p. 133).
2. II, 17, 6, although not explicitly stated as such, looks like a correction of earlier doctrines. Since the entire section II, 15-18 is a polemic against Ionians, in particular Hec., it is likely that the doctrine assailed here is Ionian, in particular Hecataean (cf. n. II, 8, 3).

μέχρι μέν νυν Κερκασώρου πόλιος ῥέει εἷς ἐὼν ὁ Νεῖλος : Vide n. II, 15, 1.

τὸ δὲ ἀπὸ ταύτης πόλιος σχίζεται τριφασίας ὁδούς : This agrees with the implications of Ps. Scyl. (l.c.) and with the Ramesside Onomasticon of Amenopĕ (Gardiner, *AEO* II, p. 153* ff.) according to which the Nile had three main branches—*'Itrw ỉmnty* "The Western River" = H.'s Canopic Branch (*ἡ δὲ ἑτέρη ... Κανωβικὸν στόμα κέκληται*); *'Itrw* *ʿ3* "The Great River" = H.'s Sebennytic Branch (*ἡ δὲ δὴ ἰθέα τῶν ὁδῶν ... Σεβεννυτικὸν στόμα*) and *P3-mw-n-p3-Rʿ* "The Water of Prēʿ" = H.'s Pelusiac Branch (*καὶ ἡ μὲν πρὸς ἠῶ ... καλέεται Πηλούσιον στόμα*). Of these three H. suggests that the Sebennytic was the largest (*οὔτε ἐλαχίστην μοῖραν τοῦ ὕδατος παρεχόμενος ταύτῃ οὔτε ἥκιστα ὀνομαστήν*; cf. Gardiner, op. cit., p. 156*) and this is confirmed by the Eg. name. By Str.'s time (l.c.) it had completely lost this status, being inferior to the Canopic and Pelusiac Branches and sending most of its water through the Phatnitic (Ball, op. cit., p. 58).

τῷ μὲν Σαϊτικὸν αὐτῶν : "Saitic" here "Tanitic" (so also Str., XVII, 1, 20 (C802); Man. Hist., *FgrH* 609, F. 2, p. 32, F. 3, p. 35). This highly confusing alternative is easily explained by two factors :

1. The Eg. name for Tanis has two forms—*Ḏʿ* and *Ḏʿnt*.
2. The sound *Ḏ* may either become a sibilant in transliteration (hence *Ḏʿnt* in Ass. becomes *Ṣaʿanu*, in Heb. צען *Çōʿan*) or T (Gk. *Τάνις*).

Σαϊτικός is based on the form *Ḏʿ* with *Ḏ* going to *Σ* (v. Beckerath, *Tanis und Theben*, p. 33). If, with v. Beckerath, we accept that Tanis was identical with Avaris, we may well have an Eg. name for this *στόμα* in

P3-mw-n-Ḥwt-wʿrt "The Water of Avaris" mentioned in a Ramesside ostracon (Gardiner, op. cit., p. 155*).

τὸ δὲ Βολβίτινον ... ἀλλ'ὀρυκτά : These two branches will have debouched at or near the same points as the modern Rosetta and Damietta Mouths. Note, however, that, if Ball's reconstruction of the ancient course is correct, it is geologically quite impossible that the Bolbitinic, at any rate, should have been artificial (Butzer, *Die Naturlandschaft Ägyptens*, p. 32 ff.). Such an error could, however, easily be explained :

1. H., or his source, could have mistaken one of the many artificial canals (D.S., I, 33, 8) for the Bolbitinic.
2. Dredging operations, straightening-out curves, repairing dykes etc. might have created the impression in this or that stretch of the *στόμα* that it was an artificial waterway.

Bibliography : Amélineau, *RA* 3 Series 20 (1892), p. 297 ff.; Guest, *JRAS* Oct. 1912 & Apr. 1913; Maspero-Wiet, *Matériaux*, I, Index, p. 250; Toussoun, *MSAA* 1922; id., *MIE* 8-9 (1925); Daressy, *BSRGE* 16(1928-9), p. 225 ff.; 18 (1932-4), p. 169 ff.; Honigmann, *RE* XVII, 1, 562 ff.; Ball, *Egypt in the Classical Geographers*, p. 22 ff.; Gardiner, *AEO* II, p. 153* ff.; Shafei, *BSRGE* 21 (1946), p. 231 ff.; v. Beckerath, *Tanis und Theben*, p. 33; Butzer, *Die Naturlandschaft Ägyptens*, p. 32.

18. μαρτυρέει δέ μοι τῇ γνώμῃ ... οὕτω σφι ταῦτα ἐχρήσθη : *Proof 2. τὸ Ἄμμωνος χρηστήριον*. This proclaimed that everybody was Eg. who drank from the Nile N. of Elephantine.

τὸ Ἄμμωνος χρηστήριον : On the Oracle of Zeus Ammon at Siwa vide n. II, 42.

Μαρέης τε πόλιος : *Μαρεία* ap Th., I, 104; D.S., I, 68; St. Byz., s.v. *Μάρεια*; Ath., I, 60; Eg. *Mr* or *P3 Mr* (Gauthier, *DG* III, p. 53 ff.; Montet, *DG* I, p. 63 ff.); Ar. Mariût. It was the frontier with Libya during the XXVIth Dyn. (II, 30, 2), a rôle reflected in a large Saite sculpture from the area of a certain Apries who is stated to be Overseer of the Frontier (*PM* IV, p. 6). The city, which only rose to importance in the L.P., clearly lay on or near the S. shore of L. Mareotis in the vicinity of which inscribed material of XXVth and XXVIth Dyn. date has come to light (*PM* l.c.) but its precise location cannot be determined with the information at our disposal. De Cosson (*Mareotis*, p. 131) and Ball (*Egypt in the Classical Geographers*, p. 18) claim that the ruins lie near El Huwariya, Breccia (ap Daressy, *ASAE* 16 (1916), pp. 234, 241) and Kees (*RE* XIV, 1676) on Kom el-Idris near Mergheb. Montet (l.c.) and Daressy (l.c.) are in favour of Amiriya.

Bibliography : Sourdille, *La Durée*, p. 31; de Cosson, *Mareotis*, Index, s.v. Marea; Gauthier, *DG* III, p. 53 ff.; Kees, *RE* XIV, 1676 ff.; *PM* IV, p. 6; Ball, *Egypt in the Classical Geographers*, p. 18; Montet, *DG* I, p. 63 ff.

Ἄπιος : Probably the Eg. *Nỉwt nt Ḥpy* "Town of Apis" (Brugsch, *Die Ägyptologie*, p. 448; Sourdille, *La Durée*, p. 31 ff.; Gauthier, *DG* IV, p. 109 ff.; Montet, *DG* I, p. 64). It must lie in or near the extreme N.W. of the Delta (Ball, op. cit., p. 17; Montet, l.c.) but its exact site is unknown. Brugsch (l.c.) and Pietschmann (*RE* I, 2807) favoured Kom el-Ḥisn, S. of Naucratis. Gauthier (l.c.), on the other hand, identified it with the Taposiris (Ar. Abusir) of Str. (XVII, 1, 14 (C799)) which was situated at the extreme W. end of L. Mariût (Ball, op. cit., p. 66). The circumstances presupposed by H.'s statements make the second much the stronger candidate.

Bibliography : Brugsch, *Die Ägyptologie*, p. 448; Pietschmann, *RE* I, 2807; Sourdille, *La Durée*, p. 31 ff.; Gauthier, *DG* IV, p. 109 ff.; Ball, *Egypt in the Classical Geographers*, p. 17; Montet, *DG* I, p. 64.

αὐτοί τε δοκέοντες εἶναι Λίβυες καὶ οὐκ Αἰγύπτιοι : The story is amply substantiated by the close affinities and interconnections between Libyans and Egs. in the W. and N.W. Delta :

1. The territory of the *Ṯḥnw*-Libyans of early Eg. texts, who were ethnically and culturally closely related to the Egs., "must either have included the western border of the Delta, or else have lain only just outside it" (Gardiner, *AEO* I, p. 116* ff.).

2. L.E. gods are associated with *Ṯḥnw*-Libyans e.g. *Ṯḥnwy*, Ḥorus of *Ṯḥnw* and Neith of *Ṯḥnw* (Gardiner, l.c.).

3. From the reign of Mineptah (c. 1224-1214 B.C.) Libyan tribes (Libu & Meshwesh) occupied all the W. Delta (Erichsen, *P. Harris I*, 76, 11 ff.; Bates, *The Eastern Libyans*, p. 213; Hölscher, *Libyer und Ägypter*, p. 59 ff.; Gardiner, op. cit., p. 121* ff.). Unlike the *Ṯḥnw* these

tribes were not ethnically related to the Egs. but had fair skins, reddish hair and blue eyes.

4. The Piankhi Stele (*Urk* III, 11) speaks of at least 6 Libyan rulers in Delta towns.

5. Marea is named on Eg. monuments only from the XXVIth Dyn. Since it was the frontier post at that time (vide supra) it is likely that it only came under firm Eg. control at that time (Kees, l.c.).

6. In Pharaonic times Marea was part of the 3rd Nome of L.E. which Ptol. called the Libyan Nome (*Geog* IV, 5, 4; Ball, op. cit., p. 113 ff.).

7. Plin. (*HN* V, 39) describes the Mareotae as the easternmost Libyans.

8. A Gk. administrative papyrus of the 4th Century A.D. makes an explicit distinction between *Μαρεωταί* and *Αἰγύπτιοι* (Wilcken, *Chr* 322, n. 4).

Thus at all periods the Western Delta must have had a strong infusion of Libyan elements. The *Ṯḥnw*-Libyans of early times were ethnically related to the Egs. but from an early period (early post O.K.?) they were supplanted by tribes (Meshwesh & Libu) which were racially quite distinct, speaking a Berber dialect which, though possessing affinities to Eg., would have been quite unintelligible to the Egs. themselves. Since the Mareotis area was regarded even in the 4th Century A.D. as *sui generis* we cannot doubt that *οἱ ἐκ Μαρέης τε πόλιος καὶ Ἄπιος* had a formidable case in H.'s time.

Bibliography : Bates, *The Eastern Libyans*, p. 51 ff.; Hölscher, *Libyer und Ägypter*, passim; Gardiner, *AEO* I, p. 114* ff.; Kees, *RE* XIV, 1676 ff.

καὶ ἀχθόμενοι τῇ περὶ τὰ ἱρὰ θρησκείῃ ... μὴ ἔργεσθαι : Because cows were sacred to Isis (vide n. II, 41) and the cult of Osiris was well entrenched in the area. At Marea he was worshipped as Osiris *Mrty* (Gauthier, *DG* III, p. 54) while at Apis, obviously enough, he will have been accorded a cult as the sacred bull of that name (vide supra). That cattle were of considerable value to the Libyans is clear since they figure prominently in booty captured in the *Ṯḥnw* lands from Pre-Dynastic times down to the reign of Ramesses III (Gardiner, *AEO* I, p. 116* ff.; Montet, *Kêmi* 13 (1954), p. 43 ff.).

ἔπεμψαν ἐς Ἄμμωνα : The date cannot be certainly established but this appears to be one of the earliest consultations of Zeus Ammon known.

The enquiry will have been conducted according to the standard Eg. procedure (on which vide n. II, 83) and will have been cast as a question like "Is it lawful for us to eat cow's flesh?" The god will then have indicated his disapproval, the officiating priest adding a few words of explanation *φὰς Αἴγυπτον ... πίνουσι* or *sim.* (Parke, *The Oracles of Zeus*, p. 214 ff.).

φὰς Αἴγυπτον εἶναι ... ἀπὸ τοῦ ποταμοῦ τούτου πίνουσι : The oracle's definition of Egypt is impeccably orthodox. In a text from Edfu which discusses the measurements of Egypt (Chassinat, *Edfou*, VI, p. 199 ff.) the country is taken to extend from Elephantine to the sea and from the Canopic to the Pelusiac Branch. Within that area it is stated to consist of two categories of territory :

(a) Inundated land.
(b) Water (The Nile, swamp, L. of Moeris, canals etc.).

This harmonizes perfectly with earlier less explicit indications :

1. The commonest name for Egypt is *Kmt* "The Black Land" i.e. the land made up of black alluvial silt as distinct from *Dšrt* "The Red Land" i.e. Desert.
2. The names of the nome divisions (Schlott, *Die Ausmaße Ägyptens*, p. 107 ff.) :

(a) The W. and E. divisions of the Delta are marked clearly by nome titles :

W. The 7th L.E. Nome which lay in the vicinity of LL. Mariût and Edkû was called the "Western Harpoon" (Montet, *DG* I, p. 69 ff.). The 3rd L.E. Nome, which occupied the Damanhur-Kom el-Ḥisn area, was called "the Western Nome" (Montet, op.cit., p. 57 ff.).
E. The 8th L.E. Nome was called the "Eastern Harpoon" (Montet, op. cit., p. 213 ff.) and lay N.W. of the Bitter Lakes around the Wadi Tumilat. The 14th L.E. Nome, apparently called the "Eastern Nome" (Montet, op. cit., p. 187 ff.), occupied the S. part of the L. Menzala area and the district to the E.
All of these nomes were watered directly or indirectly by the Nile and consisted wholly or mainly of *Schwemmland.*

(b) In the S. the 1st Nome of U.E. lay at the First Cataract and was called *Tꜣ sty* "Nubian Land", a title indicating that here Eg. and Nubian mingled in much the same way as Libyan and Eg. in the W. Delta.

Egypt was, then, to the Egs. the land made up of silt and watered directly or indirectly by the river from Elephantine to the sea and from the Pelusiac to the Canopic mouths. Since L. Mareotis was a fresh water lake adjacent to the Canopic Branch and filled by natural and artificial channels from the Nile (Str., XVII, 1, 7 (C793); Baedeker, *Egypt*^{7}, p. 27; de Cosson, op, cit., pp. 26, 62, 71 ff.), Marea and Apis will have fallen perfectly under this definition.

19-34. Discussions of the two major *cruces* posed by the Nile :

1. The cause of the inundation (19-27).
2. The location of the πηγαί (28-34).

19-27. The inundation. The Gk. fascination with this problem was based on its paradoxical character; for, unlike other rivers, it flooded in summer, not winter. This point is emphasized by H. (II, 19, 2; 24, 1; cf. Introduction, p. 142 ff.) and dominates all subsequent attempts to explain the phenomenon. Although Hom. and Hes. both mention the Nile, neither raises this issue. Bonneau's belief (*La Crue du Nil*, p. 196 ff.) that the Homeric description of the Nile as διιπετὴς ποταμός "the river fallen from heaven, fed or swollen by rain" (*Od* IV, 477, 581) implies knowledge of the origin of the inundation is clearly mistaken; for the epithet is entirely conventional in this context (cf. *LSJ* p. 428,a, s.v. Διιπετής). As for Hes., he is concerned only with the mythological origins of the river (n. II, 21). The first scientific account was that of Thal. and after him many theories were brought forward which can be conveniently divided according to the method adopted to explain the paradox.

Etesian Wind Theories

Thal. attempted to solve the problem by using the Etesian Winds which, in this context, were destined to a brilliant future. Their usefulness lay in the fact that they blow up the Nile Valley from the time of the summer solstice at the same time as the inundation rises. They were also taken up by Euthymenes of Massilia, Thrasyalces of Thasos, Democr. and Arist., sometimes by themselves, sometimes in conjunction with one or more of the following (vide n. II, 20).

Melting Snow Theory

The suggestion that the summer heat melted snow which had been deposited in winter seemed to solve the paradox. It was probably originated by Anaxagoras of Clazomenae and enjoyed wide acceptance at Athens in the 5th Century but it quickly fell out of favour, though Democr. combined it with the Etesian Wind theory, thereby obtaining two solutions to the paradox (vide n. II, 22).

Anti-Inundation Theory

Oenopides of Chios and H. tried to abolish the paradox by arguing that the behaviour of the Nile was not basically different from that of other rivers. It did not flood in summer, it shrank in winter (vide n. II, 25).

The Zone Doctrine and the Inversion of the Seasons

The paradox could be explained by the zone doctrine which taught that the earth had five climate zones and that while it was summer in the southern zones it was winter in the N. and *vice versa*. Thus, where the Nile rose, it could be winter while summer prevailed in the Mediterranean area. It was Peripatetic speculation along these lines which led to an astonishingly accurate explanation of the phenomenon (n. II, 26).

Bibliography : Berger, *Geschichte der wissenschaftlichen Erdkunde*, p. 130 ff.; Palanque, *Le Nil*, p. 20 ff.; Gigon, *Der Ursprung der griechischen Philosophie*, p. 48 ff.; Rehm, *RE* XVII, 571ff.; Forbes, *Studies*, VII, p. 22; Bonneau, *La Crue du Nil*, p. 135 ff.

The true cause of the inundation lies in meteorological factors whose detailed workings are still not precisely understood. The sequence of events appears to be as follows. The apparent movement of the sun on the ecliptic N. across the equator to the Tropic of Cancer and then back again during the period March to September causes evaporation in the areas over which it passes. The moisture is then taken up and carried to Abyssinia by two groups of winds :

1. S.E. trades which incline to the N.E. in equatorial latitudes bringing moisture from the southern Atlantic.
2. S.E. monsoons which originate over the Indian Ocean and then move N.

These winds are of different temperatures, and hence, when they meet and are compressed over the Ethiopian Highlands, unstable conditions arise and the moisture is dropped, causing torrential downpours which give the Ethiopian Plateau an extremely high annual rainfall of 75-100 cms. This vast quantity of water is then drained off into three great rivers, the Sobat (which reaches its maximum flood in October-November), the Blue Nile (which at its height in August-September provides 68 % of the Nile's water) and the Atbara (which provides at its height in August c. 22 % of the Nile's water). The Nile subsequently passes northwards in flood reaching Assuan about the beginning of June and attaining its greatest height there, in pre-barrage days, about the end of the first week in September. *Pace* How-Wells (*Commentary*, I, p. 169 ff.) and Forbes (*Studies*, VII, p. 22) melting snow has *nothing* to do with the inundation (Bonneau, *La Crue du Nil*, p. 15).

Bibliography : Palanque, *Le Nil*, p. 20 ff.; Baedeker, *Egypt*^{7}, p. LXIV; Elfandy, *BSGE* 25 (1953), p. 93 ff.; Hurst, *The Nile*, pp. 4 ff.; 255 ff.; Stricker, *De Overstroming van de Nijl*, p. 5 ff.; Bonneau, *La Crue du Nil*, p. 14 ff.

H.'s discussion of the problem is highly scientific :

1. States problem (II, 19).
2. Discusses other theories and gives reasons for not accepting them (II, 20-23).
3. Offers his own with a clear statement of the epistemological difficulties involved.

In detail vide Foucart, *BIE* 25 (1943), p. 83 ff.

19. ἐπέρχεται δὲ ὁ Νεῖλος ... καὶ πλεῦν ἔτι τούτου καὶ ἔλασσον : At the apex of the Delta the inundation attained a width of 10-20 kms. = 6-12 miles while in the Delta this increased to 200 kms. = c. 125 miles. S. of Memphis only during a really high Nile did the flood reach the cliffs which flank the valley, a distance rarely exceeding 18 miles (Bonneau, *La Crue du Nil*, p. 85 ff.). Irrigation canals would, of course, carry the waters much further but, even so, the only part of *Ἀραβίη* where flood water could travel a distance comparable with that in H.'s statement is the Wadi Tumilat where an ancient irrigation canal ran a distance of c. 38 miles. This would carry Nile water between one and two days from the Delta (cf. Str., XVII, 1, 25 (C804); Baedeker, *Egypt*^{7}, p. 180; n. II, 4, 3 for H.'s distances). The only part of *Λιβύη* which fits is the Fayyûm where the flood waters could be said, at maximum, to get as far as the cliffs surrounding it, if only in canals. The distance to such a point from the Nile by canal would be over 50 miles i.e. c. 2 days' sail.

τοῦ ποταμοῦ δὲ φύσιος πέρι οὔτε τι τῶν ἱρέων : At first sight this is odd. The priests certainly had views on the cause of the inundation though it was not a problem which greatly interested them. To them, however, the difficulty was theological, not physical i.e. they asked "Who caused it?" not "What?" Several opinions are known :

1. Most of the major gods are, at some time or another, stated to bring forth the inundation simply by their verbal command (Bonneau, op. cit., p. 229 ff.).
2. The inundation was connected with the passion and resurrection of Osiris, a view expressed in several myths :

(a) The Nile was identified with Osiris and the flood interpreted as his resurrection (Bonneau, op. cit., p. 243 ff.).
(b) The flood is claimed to be the sweat of Osiris as early as the *PT* (788, 1360). This notion assumes that the earth is the corpse of Osiris from which the life-giving waters arise.
(c) The inundation was caused by the tears of Isis as she wept for her dead husband Osiris (Paus., X, 32). This idea survived into modern Egypt where the flood is said to be caused on the *Leylet en-Nuḳtah* "Night of the Drop" (17th June) when a magical drop falls into the Nile. *Pace* Palanque (*Le Nil*, p. 13 ff.) and Bonneau (op. cit., p. 255) there is no documentary evidence of this idea from ancient Eg. sources but there is no reason to doubt that it was widely current in the L.P. (Bonnet, *RÄRG* p. 525 ff.; Derchain, *CdE* 45 (1970), p. 282 ff.).

(d) The inundation was caused by Sothis who was identified with Isis (Bonneau, op. cit., p. 263 ff.).

3. The inundation was the gift of the crocodile, in particular of the crocodile god Sobk whose activities in this respect are described in much the same terms as those of Osiris (Bonneau, op. cit., p. 299 ff.).

In one text a high flood is related to rains in Nubia (Vikentiev, *La Haute Crue du Nil et l'Averse de l'An 6 du Roi Taharqa*, pp. 50 ff., 63). The rain is, however, clearly supplementary, the factor leading to great abundance, and was obviously not regarded as the cause of the inundation itself. Knowledge of exceptional rainfalls S. of the First Cataract has simply been employed to explain the unusually high Nile (op. cit., p. 53). It should also be noted that this rainfall is attributed to Amūn (l. 17) and that information on the Abyssinian rains is *not* in question. Two other texts alleged by Bonneau (op. cit., p. 195 ff.) to refer to rain in this context do nothing of the sort. *Urk* IV, 1116, 4 is badly mutilated but, even if Sethe's restored text is correct, it does not imply that rain was the cause and the same holds true of the Daphnae Stele (Petrie, *Tanis*, II, pl. XLII, 15; Vikentiev, op. cit., p. 52).

Why did H. fail to extract one of these doctrines from the priests? Two explanations suggest themselves :

1. The priests were restrained by religious scruples. According to Hld. (*Aeth* II, 28, 2) such lore on the Nile was reserved entirely for them (Bonneau, op. cit., p. 136).
2. The priests *did* tell H. but their notions were so theologically orientated that he could not regard them as *real* explanations (vide n. II, 28).

Of these 2. is preferable :

1. Hld. is not a good source for Eg. religion and he alone mentions reticence on the subject.
2. H. fails to get satisfaction not only from priests but from anyone else. Somebody must surely have told him something.

Bibliography : Lane, *MCME* p. 495; Palanque, *Le Nil*, p. 13 ff.; Vikentiev, *La Haute Crue du Nil et l'Averse de l'An 6 du Roi Taharqa*; Stricker, *De Overstroming van de Nijl*, p. 7 ff.; Bonnet, *RÄRG* p. 525 ff.; Bonneau, *La Crue du Nil*, p. 135 ff.; Helck-Otto, *Kleines Wörterbuch*², p. 250 ff.; Derchain, *CdE* 45 (1970), p. 282 ff.

πρόθυμος δὲ ἔα ... ἥντινα δύναμιν ... τὰ ἔμπαλιν πεφυκέναι τῶν ἄλλων ποταμῶν : Vide supra, p. 91.

ἀπὸ τροπέων τῶν θερινέων : Cf. D.S., I, 36; Plin., *HN* V, 10. The summer solstice falls on June 22nd or 23rd and the Nile generally speaking began to rise about the beginning of June at Assuan and about the 20th at Cairo, though it *might* begin anywhere between 10th June and 10th July. H.'s information was obviously, therefore, obtained in L.E. (so also Sourdille, *La Durée*, p. 15 ff.). Bonneau's objection that "la date du 21 juin ne correspond à aucun fait précis, à aucune étape de la vie du fleuve" (op. cit., p. 43) is, therefore, without foundation. The Egs. did not, apparently, regard the solstice as a portent of the inundation (Winlock, *PAPhS* 83 (1940), p. 455). They always associated it with the Heliacal Rise of Sirius on the 19th-20th July (vide n. II, 4, 1).

ἐπ'ἑκατὸν ἡμέρας ... τροπέων τῶν θερινέων : The ancients and the Copts give the time span as from 90-100 days (Palanque, op. cit., p. 21) which agrees with modern experience. The Nile began to rise at Cairo c. 20th June and then started to fall rapidly at the end of September, though absolute low water was not reached until June (Bonneau, op. cit., p. 20 ff.).

ὅ τι αὔρας ἀποπνέουσας μοῦνος πάντων ποταμῶν οὐ παρέχεται : What *does* this mean? It is usually interpreted "there are no breezes down the Nile i.e. *from* the south" (How-Wells, *Commentary*, n. ad loc.; cf. Waddell, *Herodotus Book II*, n. ad loc.) and II, 27 appears to lend compelling support. Nevertheless, this view is quite mistaken. We have the following clues :

(a) *Αὔρα* is particularly used of cool breezes which arise from water (*LSJ* p. 248,a, s.v. *αὔρα* 1).
(b) D.S. I, 38, 7 *πᾶς ... ποταμὸς ἀπὸ χιόνος ῥέων ὁμολογουμένως αὔρας ἀναδίδωσι ψυχρὰς καὶ τὸν ἀέρα παχύνει. περὶ δὲ τὸν Νεῖλον μόνον τῶν ποταμῶν οὔτε νέφους ὑποστάσεις ὑπάρχουσιν οὔτ'αὖραι ψυχραὶ γίνονται οὔθ'ὁ ἀὴρ παχύνεται* (cf. Plin., *HN* V, 58; Aristid., *Or* 36, 114; Thphr., *Vent* III, 25). This clearly means the standard morning breezes which are felt in the immediate vicinity.

(c) Hp., *De Aer* XIX states *ἀπὸ τῶν ἄρκτων αἰεὶ πνέουσι πνεύματα ψυχρὰ ἀπό τε χιόνος καὶ κρυστάλλου καὶ ὑδάτων πολλῶν.* This passage shows that water was considered capable of producing much more than mere breezes. It could be the source of powerful winds capable of being felt a considerable distance from the water surface which caused them.

(d) Thphr. l.c. states the reason why the breezes are absent, *ἀπὸ μόνου δὲ τοῦ Νείλου δοκοῦσιν οὐκ ἀποπνεῖν αὖραι ἢ ἐλάχισται διότι θερμὸς ὁ τόπος καὶ ἐξ οὗ καὶ εἰς ὃν ῥεῖ. αἱ δ'αὖραι πυκνουμένου τοῦ ὑγροῦ εἰσί. διὸ καὶ οὐδ'ἀπὸ τῶν ἐν Λιβύῃ ποταμῶν οὐδ'ἀφ'ἑνὸς αὖραι οὐδαμῶς. ἅπαντες γὰρ θερμοί ... καίτοι φασί γε θαυμαστῶς καταψύχεσθαι τὸν ἀέρα πρὸς τὴν ἕω. τοῦτο μὲν οὖν ἐπισκεπτέον. τάχα γὰρ ἀποψύχεται μέν, οὐ δύναται δὲ πορρωτέρω προιέναι καὶ ποιεῖν αὖραν, ἐμπύρων εὐθὺ τῶν ὑποδεχομένων ὄντων τόπων.*

H.'s familiarity with Hippocratic doctrines (Introduction, p. 165 ff.) together with datum (a) indicates that H.'s *αὖραι* in II, 19 & 27 and D.S.'s *αὖραι ψυχραί* are identical. Further, Hp., Thphr. and D.S., together with the natural interpretation of H.'s Gk., show that the problem in II, 19, 3 is determining why, of all rivers, the Nile does not give off cold breezes from its surface. Hp., Thphr, and D.S. also give an obvious answer viz. that the Nile will not give off *αὖραι* anywhere along its course because the high temperatures prevailing throughout that area make the river *θερμός* and *θερμά* cannot give off cool breezes. Surely this is what H. is trying to say in II, 27. Unfortunately, he does not quite say that. Let us look more closely at this passage. It translates "As for the cool breeze, the reason why it is not given off (i.e. from the surface of the Nile, harking back to II, 19) is, in my opinion, that it is unlikely that any wind should blow from very hot lands (cf. II, 22, 2) whereas a cold breeze is wont to have its origin in some cold quarter". Two things are immediately clear :

1. H. could not have meant *οὐδέν*. To say that "no wind is wont to blow from very hot lands" not only flatly contradicts current meteorological theory (e.g. *De Aer* XIX) but H.'s express statement in II, 22. Two solutions suggest themselves :

(a) *οὐδέν* is careless writing and means *οὐδὲν τοιοῦτο* (referring back to *τῆς αὔρης δὲ πέρι*).

(b) The text is corrupt and H. wrote something like *οὐκ οἰκός ἐστιν αὐτὴν* (sc. *τὴν αὔρην*) *ἀποπνέειν.*

Either remedy will give what *must* be H.'s meaning.

2. There is confusion between purely local exhalations from a water surface and winds which arise over water and then blow to far distant points. H. starts with the first, passes to the second and then uses a blanket expression (*ἀπὸ ψυχροῦ τινος*) which covers both. The difficulties can, perhaps, best be resolved by assuming a brachylogy e.g. *αὖραι* i.e. "cool breezes" (do not blow from a warm source just as they) do not blow from very warm countries. It is from cold things (*ἀπὸ ψυχροῦ τινος*) that *αὖραι* emanate.

To summarize. H.'s problem was simply that of determining why cool breezes do not rise from the surface of the Nile. His answer was that the lands through which it flows are so hot that they raised the temperature of the Nile to a point where this was impossible.

20. τῶν ἡ ἑτέρη μὲν λέγει τοὺς ἐτησίας ... ἐκρέειν τὸν Νεῖλον : Since the onset of the Etesian Winds follows the summer solstice and the Heliacal Rise of Sirius (Arist., *Mete* II, 5 (361b)) and roughly coincides with the beginning of the inundation, it was seen from an early period to present a possible solution to the paradox of the inundation (vide supra, p. 91 ff.) and is the first sign of the application of Gk. rationalism to the problem. The theory attacked is that of Thal. (*DK* 11 A16 ~ *KR* 72-3) who accepted the idea that the Nile started from Ocean (vide n. II, 21) and then proceeded to explain the mechanism of the flood. Bonneau (*La Crue du Nil*, p. 151 ff.), following Stricker (*De Overstroming*, p. 10 ff.; cf. de Wit, *CdE* 32 (1957), p. 25; Sauneron, *BIFAO* 60 (1960), p. 15, n. 3), alleged that the theory had Eg. antecedents. Stricker's thesis has two supports :

1. The tradition that Thal. visited Egypt and had received some of his doctrines from there.

2. The Etesian Winds are often mentioned in Eg. texts in connection with the inundation.

These arguments are unacceptable.

(1) Ancient traditions on Thal.'s visit are totally untrustworthy (vide Introduction, p. 52 ff.).
(2) The relationship is seen in Eg. texts in one of two ways :

(a) They are contemporaneous and both have beneficial effects. They are, thus, often spoken of in one and the same breath (Stricker's texts 1-17 *all* fall into this category).
(b) The one affects the other :

  I. The wind, giver of freshness and life, imparts fertility to the flood and the fields and thus is an agent of resurrection (de Wit, l.c.).
  II. The wind holds back the inundation to fertilize the fields (Sauneron, op. cit., p. 13). There is a possibility here of contamination by Gk. ideas.

In all these cases the relationship is seen in thoroughly theological terms (de Meulenaere, *BiOr* 16 (1959), p. 106 ff.). There is no evidence of mechanical causation. Stricker 18, the only apparent exception, cannot count because the translation is quite uncertain (Sauneron, l.c.).

We must, therefore, conclude that the attempts of Stricker and Bonneau to find an Eg. prototype are unconvincing. They are, in any case, quite superfluous. That the two events took place at the same time would be obvious after a year or two's living in Egypt to anyone endowed with Hellenic powers of observation. The most plausible origin is that the idea arose from such observation and the growing Gk. interest in mechanical causation as the motive force behind natural phenomena (vide Introduction, p. 156 ff.).

Thal.'s theory left an indelible mark on later speculation. It was slightly adapted by Euthymenes of Massilia (*FgrH* 647, F.1(5)). When he was sailing down the W. coast of Africa, he saw the mouth of a river whose fauna and flora were identical with those of the Nile. He assumed that this was the source and proceeded to explain the inundation by arguing that the Etesian Winds blew the waves into this river and caused flooding further down. Later, the Etesians were claimed to pile up sand at the mouth of the Nile or are made the vehicles bringing the rain clouds to Ethiopia which cause the inundation (vide n. II, 24). In general vide Gigon, *Der Ursprung der griechischen Philosophie*, p. 49 ff.; Bonneau, op. cit., p. 151 ff.

πολλάκις δὲ ... οἷόν τε καὶ ὁ Νεῖλος : A fine example of H.'s skill in argument (for which see Introduction, p. 160 ff.). He demolishes the theory with two proofs :

(a) *Πολλάκις δέ ... τὠυτὸ ἐργάζεται* : Observation. The correlation between the coincidence of the Etesian Winds and the inundation is by no means consistent.
(b) *πρὸς δέ ... οἷόν τι καὶ ὁ Νεῖλος* : Argument *κατ'ἀναλογίαν*, one of the most powerful tools in the Pre-Socratic armoury. Many rivers in Syria and Libya are exposed to the Etesians but do not flood. Therefore, the Etesians do not cause flooding.

For later assaults on this explanation see Bonneau, op. cit., p. 154 ff.

21. λόγῳ δὲ εἰπεῖν θωμασιωτέρη ... περὶ πᾶσαν ῥέειν : Cf. II, 23 for H.'s critique. This theory, based on the same geographical concept as that of Thal., simply states that, somehow or other, *'Ωκεανός* is not only the source of the Nile but also the cause of the inundation. The seeds of the idea are of great antiquity. In Hom. it is claimed that Ocean encircles the world (*Il* XVIII, 607 ff.) and that from it *πάντες ποταμοὶ καὶ πᾶσα θάλασσα / καὶ πᾶσαι κρῆναι καὶ φρείατα μακρὰ νάουσιν* (ib. XXI, 194 ff.). In Hes. (*Th* 338) Nile is listed amongst the rivers in question. These ideas were subsequently taken over into the geographical schemes of Anaximand. and Hec. (IV, 8; Introduction, p. 126 ff.), the latter clearly stating that Nile communicated with Ocean (*FgrH* I, F. 302). That Hec. is the person here criticized is certain :

1. D.S. states (I, 37, 3) that he was one of those who *εἰς τὰς μυθώδεις ἀποφάσεις ἀπέκλιναν* on this subject.
2. The vehemence of the polemic indicates that Hec. is the target (vide Introduction, p. 87).

It is possible that Hec.'s confidence was based on the voyage of Euthymenes of Massilia who had, it must have seemed, proved it by observation (vide n. II, 20, 2). Despite H.'s attack this theory enjoyed a long and distinguished history. In general vide v. Scheliha, *Die Wassergrenze*, p. 18 ff.; Bonneau, *La Crue du Nil*, p. 146 ff.

It is argued by Bonneau (op. cit., p. 143 ff.) that the theory is Eg. in origin and it certainly does bear a striking resemblance to the view that

Nūn, the primeval ocean and origin of life, was the source of the Nile (vide Bonnet, *RÄRG* p. 535 ff.). Nevertheless, the Gk. concept is probably independent. The notion of a hemispherical cosmos and circular world is a natural development in any early society (n. II, 24-26) and to a maritime and island-dwelling people nothing could seem more fitting than that the earth should be surrounded by water. Furthermore, all sources of water would need an origin and the Gks., with their monist minds (Introduction, p. 149 ff.), would do their utmost to establish one single source. The great encircling stream would be the obvious choice. Hence, all Gk. and, later, all foreign rivers, including the Nile, were derived from it. With the dawn of rationalism it would be natural to interpret these old notions in terms of physical or geographical derivation and we then reach the view of world hydrography described above. Even if it is accepted that the concept of *'Ωκεανός* must be non-Gk. (as by *KR* p. 12 ff.), a Mesopotamian origin would be much more likely than an Eg. since mythological borrowings from the Near Eastern cultural block are certain (West, *Hesiod. Theogony*, p. 18 ff.; id., *Early Greek Philosophy and the Orient*, passim) whereas the same is very far from being true of Egypt.

22. **ἡ δὲ τρίτη τῶν ὁδῶν ... ῥέειν ἀπὸ τηκομένης χιόνος ... ἐκδιδοῖ δὲ ἐς Αἴγυπτον** : This explanation derives from Anaxagoras of Clazomenae (*DK* 59, A42, 5; A91 ~ *FgrH* 646(4)) and was a logical development of his largely traditional geographical system according to which the earth was a disc at the rim of which the sun rose and set. The coldest part was the centre, the hottest the rim where the mts. of Ethiopia were located (Bonneau, *La Crue du Nil*, p. 161 ff.). Attempts to find a prototype in A. (e.g. Gigon, *Der Ursprung der griechischen Philosophie*, p. 48) are adequately countered by Bonneau (op. cit., p. 163). As usual, the theory has its origins in an attempt to explain the paradox of the inundation (Introductory n. II, 19-27).

H. devotes his longest refutation to this theory. Why? The reason must be that it was very popular in the 5th Century, particularly at Athens. Schol. A.R., IV, 269 (cf. *FgrH* 647, F. 1(2)) emphasizes that it was the standard doctrine of the tragedians and it is, in fact, found in surviving passages of A. (*Supp* 559; F. 300 (N^2)) and E. (*Hel* 1 ff.; F. 228(N^2) (*Archelaus*)). Bonneau (op cit., p. 168) goes so far as to describe the doctrine as current "dans l'entourage de Périclès" and this is probably correct. Thus, the trouble taken by H. to demolish the doctrine may indicate that the passage was written in Athens for Athenian consumption (cf. Foucart, *BIE* 25 (1943), p. 91). Be that as it may, his assault appears to have destroyed the theory in this form once and for all. It did, however, have some influence; for later in the century we find Democr. arguing (*DK* 68, A99 ~ *FgrH* 647, F.1(4)) that the snow which fell in northern countries was the cause of the inundation. It was melted, he claimed, at the summer solstice and formed into clouds which were then carried S. by the Etesian Winds. When these clouds met the Ethiopian Mts. their moisture fell as rain and caused the Nile to flood (in general vide Bonneau, op. cit., p. 161 ff.).

κῶς ὦν δῆτα ... ἡ ἀνάγκη ἐλέγχει : H.'s elaborate, ingenious and highly creditable refutation employs argument *κατὰ τὸ εἰκός* (vide Introduction, p. 162 ff.) and is based on 4 proofs :

1. The winds from Ethiopia are hot whereas snow gives rise to cold winds. The observation is quite correct. From December to January cold, dry winds blow from the S. followed, from March to the beginning of June, by the hot *Khamsîn* from the same sector which occurs, on average, three times a month, sometimes lasting for as long as two to three days (Baedeker, *Egypt*^{7}, p. LXXVIII; Hurst, *The Nile*, p. 171 ff.; Besançon, *L'Homme et le Nil*, p. 18 ff.).
2. The country to the S. gets neither rain nor ice whereas after a fall of snow it must rain within five days. This observation is not so happy. It is mentioned by Gellius (*Epit* VIII, 4) as a Herodotean curiosity and is quite clearly a piece of folk meteorology. Rawlinson (*Herodotus*, II, p. 33, n. 7) well compares the English dictum "Three days of white frost are sure to bring rain".
3. The inhabitants of Ethiopia are black from the heat (cf. II, 104, 2 for H. the anthropologist).
4. Kites and swallows are resident in the Nile area and are supplemented by migrating cranes from Scythia in search of a better climate. These observations are generally true :

Kites. *Some* species are resident in Egypt and the Sudan—*Milvus aegyptius* Gmelin is abundant and resident in Egypt and has a close relative

resident further S. (Nicoll, *Handlist*, p. 55; Meinertzhagen, *Nicoll's Birds of Egypt*, II, p. 410); the Black-Shouldered Kite (*Elanus caeruleus* Desfontein) is also resident (Nicoll, op. cit., p. 56; Meinertzhagen, op. cit., p. 412). On the other hand, the Black Kite (*Milvus migrans* Boddaert, Nicoll, op. cit., p. 55; Meinertzhagen, op. cit., p. 410) and possibly the Red Kite (*Milvus milvus* L.) (Nicoll, op cit., p. 56 but cf. Meinertzhagen, op. cit., p. 411) occur only as rare migrant visitors.
Swallows. The position is similar. The Eg. swallow (*Hirundo rustica savignii* Stephens) is resident in Egypt in considerable numbers (Nicoll, op. cit., p. 29; Meinertzhagen, op. cit., I, p. 305 ff.). On the other hand, *Hirundo rustica rustica* L. (Nicoll, op. cit., p. 28; Meinertzhagen, op. cit., p. 303 ff.) and *Hirundo daurica rufula* Temminck, common in Greece (Nicoll, op. cit., p. 29; Meinertzhagen, op. cit., p. 307), are migratory.
Cranes. Many species migrate in large numbers from northern latitudes to the Sudan and Abyssinia. None is resident in Egypt (Nicoll, op. cit., p. 84 ff.; Meinertzhagen, op. cit., pp. 627 ff.).

These arguments, for all their admirable qualities, are, of course, specious because they are based on a false premise viz. the conviction of contemporary geography that Ethiopia had a hot climate because it lay on the edge of the world and, therefore, received the full blast of the sun's rays as it rose and set. This idea made it impossible for H. to imagine that beyond the known hot belt there lay a zone where more temporate conditions might be encountered. This does not, in any way, detract from H.'s claim to rationalism; for rationalism is nothing but the establishment of a point by self-consistent argument from principles which induction leads one to accept as sound. The traditional geography was still axiomatic because all known factors suggested that it was correct. To those committed to its premises, as most if not all of his contemporaries were, H.'s argument must have seemed immensely compelling.

23. **ὁ δὲ περὶ τοῦ 'Ωκεανοῦ λέξας ... 'Ωκεανὸν ἐόντα :** Cf. II, 21. The untidy split discussion of this doctrine is lamentably not untypical (n. II, 50; Foucart, *BIE* 25 (1943), p. 87). H. refutes the Hecataean doctrine as an example of *petitio principii*. It is question-begging in that the existence of *'Ωκεανός* has not been established.

H.'s consistent refusal to accept *'Ωκεανός* (IV, 8, 2; 36, 2) is another symptom of the slow crumbling of the Ionian system of geography (Introductory n. II, 15-18). Note, however, that even though H. jettisons *Ὠκεανός* he retains the intimately related *Wassergrenze* theory (n. II, 16). Another ghost? (cf. nn. II, 33-4).

Ὅμηρον δὲ ... ἐσενείκασθαι : H. has a high regard for the powers of fabrication shown by the epic poets (cf. II, 53 with n. ad loc.) but he is not original in this. Sol. remarks *πολλὰ ψεύδονται ἀοιδοί* (F. 21, (Diehl^{3})) and Pi. is equally scathing (*O* I, 28 ff.).

24-6. H.'s own explanation of the inundation. Several preliminary points should be observed :

(a) The apology for stating an opinion at all (*εἰ δὲ δεῖ μεμψάμενον γνώμας τὰς προκειμένας αὐτὸν περὶ τῶν ἀφανέων γνώμην ἀποδέξασθαι*). As usual H. is aware of epistemological difficulties when they arise (Introduction, p. 157 ff.; cf. Foucart, *BIE* 25 (1943), p. 95 ff.).

(b) The theory which H. expounds is based, like much in Book II, on the impression of *the size* of things Eg. He starts with the assumption that the Nile is at its proper height *during the inundation.* The problem is, therefore, to explain the fall, not the rise, of the inundation.

(c) H.'s *γνώμη* provides a particularly neat solution of the inundation paradox by using one mechanism viz. solar evaporation to explain the twin phenomena of simultaneous low Nile + flooding in Europe and high Nile + low water in Europe.

(d) H., as usual, shows himself fully aware of contemporary scientific doctrines. His concept of the structure of the *κόσμος* (cf. nn. II, 22, 24) and the workings of evaporation (n. II, 25, 1) together with the climatology based upon them are doctrines of long standing. More novel, but probably not original, is the firm grasp of the circulation of moisture in the atmosphere which was to contribute greatly to finding the correct solution (vide supra, p. 92 ff.). Note, however, that, though the realization of the inversion of the seasons would seem to follow from H.'s notions on the movements of the sun in II, 25, he still remains firmly Graeco-centric. Summer is summer and winter is winter according to the climate of the Gk. world. It never seems to occur to him that the activities of the sun in the S. really make it summer down there when it is winter in Greece. In the same way he orientates himself entirely according to points on the Gk. horizon (Heidel, *The Frame of the Ancient Greek Maps*, p. 20 ff.).

24. τὴν χειμερινὴν ὥρην ... τῶν ποταμῶν : The two causal factors stated *ἐν ἐλαχίστῳ* :

1. The apparent seasonal movement of the sun on the ecliptic.
2. Evaporation.

τὴν χειμερινὴν ὥρην ... τὰ ἄνω : This bizarre idea is based on the early Gk. concept of the cosmos as a hemisphere of relatively small compass. The earth was a disc over which the heavens extended in a hemisphere to meet the disc at the edge. The sun and other heavenly bodies passed across this dome (Gisinger, *RE* SB IV, 532 ff.; Ninck, *Die Entdeckung von Europa*, p. 24 ff.; *KR* p. 10) and, distances being thought so small, it was believed that the sun could be affected by storms in rather the same way as clouds are blown about, an idea championed even by thinkers of the calibre of Anaximand. (*KR* p. 138), Anaximen. (*KR* p. 154 ff.) and Diog. Apoll. (*KR* p. 439). This offered a ready, if specious, explanation of the apparent seasonal N.-S., S.-N. movement of the sun, i.e. its movement on the ecliptic between summer and winter solstice. H. is, in fact, correct in assuming that this phenomenon plays a crucial rôle in causing the inundation of the Nile (vide Introductory n. II, 19-27).

τῆς γὰρ ἂν ἀγχοτάτω ... μαραίνεσθαι τῶν ποταμῶν : n. II, 25, 1-2.

25. διεξιὼν τῆς Λιβύης τὰ ἄνω ὁ ἥλιος τάδε ποιέει : The evaporative effects of the sun :

(a) During its winter sojourn over Libya :

  (1) It creates rain-bearing southerly winds (*ἕλκυσας ... ὑετιώτατοι*) which fill the rivers of Europe (*οἳ μὲν* (sc. *ποταμοὶ*) *ὀμβρίου ὕδατος συμμισγομένου ... ῥέουσι μεγάλοι*).
  (2) It causes the Nile's level to fall.

(b) During the summer it moves N. and evaporates all rivers at the same rate (*πρηϋμένου δὲ τοῦ χειμῶνος ... ὁμοίως ἀπὸ πάντων ἕλκει τῶν ποταμῶν*) allowing the Nile to flow in its proper i.e. summer proportions.

Evaporation and condensation were discussed as early as Hes. (*Op* 550 ff.) and by the time of the Pre-Socratics had become major factors in explaining meteorological phenomena (Berger, *Geschichte der wissenschaftlichen Erdkunde*, p. 119 ff.; Gilbert, *Die meteorologischen Theorien des griechischen Altertums*, p. 439 ff.). According to Anaximand. rain originated *ἐκ τῆς ἀτμίδος τῆς ἐκ τῶν ὑφ'ἥλιον ἀναδιδομένης* (*KR* 131) while Anaximen. taught that it was caused by condensation of air (*KR* 161). Xenoph. thought that the seas were the origin of rain (*KR* 186). The evaporation theory dominates the meteorological thinking of the Hippocratic *De Aer* which contains an outstandingly lucid account of its mechanics in Ch. VIII. Anaxagoras thought along similar lines (*KR* 528-9) as did Diog. Apoll. who related the doctrine to the inundation in his own way. He claimed *ὑπὸ ἡλίου ἁρπάζεσθαι τὸ ὕδωρ τῆς θαλάσσης, ὃ τότε εἰς τὸν Νεῖλον καταφέρεσθαι. οἴεται* (sc. Diog.) *πληροῦσθαι τὸν Νεῖλον ἐν τῷ θέρει διὰ τὸ τὸν ἥλιον εἰς τοῦτον τὰς ἀπὸ γῆς ἰκμάδας τρέπειν* (*DK* 64, A18 ~ *KR* 613; cf. Diller, *Hermes* 67 (1932), p. 38). This explanation, as far as it goes, is absolutely correct.

ἅτε διὰ παντὸς τοῦ χρόνου ... ἀνέμων ψυχρῶν : In Ethiopia evaporation is assisted *κατὰ* H. by three factors—the clarity of the air which keeps the temperature up, the absence of shade and the absence of cold winds which bring the temperature down. This shows a good grasp of the scientific principles involved. Hurst writes (*The Nile*, p. 253) "Evaporation is affected by the dampness of the atmosphere, and by the wind and temperature". In Egypt and most of the Sudan it is heavy, increasing from the Delta to Khartoum and then progressively decreasing further S. It is at its lowest in the S. Sudan at the height of the rains in July and August.

δοκέει δέ μοι οὐδὲ πᾶν τὸ ὕδωρ ... ὑπολείπεσθαι περὶ ἑωυτόν : Ultimately the doctrine of Thal. that all was nourished by moisture (*DK* 11, A12; cf. Xenoph., *KR* 179-180). Guthrie writes (*History of Greek*

Philosophy, I, p. 67) "Moisture ... was to the Greeks the nutritive element *par excellence*, as fire is the motive element, and fire is 'fed' by it, in the form of vapour". Note, however, that H.'s statement does not help the argument one iota and that it would be better omitted.

αὐτὸς ἑωυτοῦ ῥέει πολλῷ ὑποδεέστερος ἢ τοῦ ϑέρεος : Vide Introductory n. II, 24-6(b). This ingenious idea was also supported by Oenopides of Chios (fl. c. 420 B.C.) (*DK* 41, A11 ~ *FgrH* 647, F.1(6)), though differently developed. He taught that during winter the sun passed beneath the earth and drew off the Nile's water at the source, thereby causing low water, whereas in summer it returned to its course over it, did not affect the Nile and, therefore, allowed it to flow at full strength.

26. αἴτιος δὲ ὁ αὐτὸς οὗτος ... τὴν διέξοδον αὐτῷ : "The main characteristic of the climate of the greater part of the Nile Basin is its dryness" (Hurst, *The Nile*, p. 173). The lowest humidity rate is that of Merowe where the yearly average is only 23 % but sometimes in the N. Sudan atmospheric moisture *decreases almost to zero*. In the S. Sudan humidity is also low from January to March but rises sharply during the period of the rains (op. cit., p. 173 ff.). As often in this section H.'s information does not extend far enough S. to prevent misunderstanding.

εἰ δὲ ἡ στάσις ... τὸν Νεῖλον : As in II, 11 H. drives home his argument by a vivid, hypothetical *κατ' ἀναλογίαν*.

διεξιόντα ... τὸν Ἴστρον τά περ νῦν ἐργάζεται τὸν Νεῖλον :
For the idea that the Danube is the European counterpart of the Nile and its implications vide n. II, 33 and cf. Pi., *O* III, 14-18; *I* VI, 23.

27. τῆς αὔρης δὲ πέρι ... φιλέει δὲ πνέειν : Vide n. II, 19, 3.

οὐκ οἰκός ἐστι : Argument *κατὰ τὸ εἰκός* (vide Introduction, p. 162 ff.).

28-34. The *πηγαί*, second of the major *cruces* (vide supra, p. 91). It remained a problem throughout antiquity. The oldest view is that the river rose in Ocean. Ap Hes. (*Th* 338) this must still be theology but Hec., possibly strengthened by Euthymenes (n. II, 21), also accepted it, though doubtless in a more scientific spirit. H.'s rejection of Ocean (II, 21) immediately raised the problem in quite new terms viz. "In what part of the *Erdinsel* did the Nile rise?" Theorists on the subject fall into 4 categories (Honigmann, *RE* XVII, 1, 556 ff.) :

1. Westerners.
2. Easterners.
3. Antichthonians.
4. Southerners.

Their discussions were bedevilled consistently by two considerations either acting together or individually :

(a) The conviction that crocodiles and hippopotami were sure indications of the Nile (op. cit., 557).
(b) A series of misleading geographical theories.

1. *Westerners*

To this group H. himself belonged. He tries to solve the riddle by proceeding in several stages :

1. *ἱστορίη* "verbal enquiry" (II, 28-33, 1) :

(a) *ὁ γραμματιστὴς τῶν ἱρῶν χρημάτων τῆς Ἀθηναίης* gave him nothing but mythology (28).
(b) Unnamed sources described the course of the river as far as the land of the *Αὐτόμολοι* (29-31).
(c) *ἄνδρες Κυρηναῖοι* described the journey of young Nasamonians to a land to the S. where a river with Nilotic proportions and fauna was encountered (32-33, 1).

2. *γνώμη* "opinion, inference" :

(a) The land S. of the *Αὐτόμολοι* is unknown (datum). This must be because the desert begins there (*τὸ δὲ ἀπὸ τοῦδε ... ὑπὸ καύματος*; inference based on current geographical concepts vide n. II, 22).
(b) The Nasamonians encountered a river filled with crocodiles and with people living round it (datum). A whole string of inferences follows :

(1) Since the desert belt in the S. is uninhabitable, the inhabited river must lie to the N. of that belt.
(2) Since the *Αὐτόμολοι* live at the edge of the *οὐκουμένη*, the course of this river can, at its furthest S., only lie on the same latitude as they do.
(3) Since the Nasamonians lived to the W. of Egypt, and journeyed S., this river must also lie to the W.

(c) Europe and its Danube have an exact counterpart in Libya and its Nile (33, 2-4; 34), a conviction arising from the influence of the symmetrically arranged *πίναξ* of Anaximand. and his followers.

From this converging body of information and inference H. concludes that the course of the Nile is analogous to that of the Danube and that its *πηγαί* lie, therefore, far to the W. on the same meridian as those of its northern opposite number. It may well be that insistence on the W-E course of the Nile (*ῥέει δὲ ἀπὸ ἑσπέρης τε καὶ δυσμέων* II, 31) and the westerly direction given to the journey of the Nasamonians (*τὴν ὁδὸν ποιευμένους πρὸς ζέφυρον ἄνεμον* II, 32) are pure deduction based on this process of reasoning.

The W. theory enjoyed considerable popularity with later thinkers but precise locations vary. The early Ionian philosopher Promathus of Samos (*FgrH* 646, F.1(5); Gisinger, *RE* XXIII, 1, 1285 ff.) claimed that the source lay on the snow-covered *'Αργύρουν ὄρος*. Juba (op. cit., 275, F. 38) favoured what appears to be M. Atlas while Plin. (*HN* V, 51) maintained a well-advised reticence.

2. *Easterners*

The Ionian conviction that the Indian Ocean was an inland sea and that India and Africa were joined by a land bridge (Gisinger, *RE* SB IV, 558) together with the presence of crocodiles in Indian rivers suggested to many that the *πηγαί* lay in India (Ps. Arist., *FgrH* 646, F.1(4); Str., XV, 1, 25 (C696); Arr., *An* VI, 1, 2). Surprisingly Procop. was convinced of its truth (*Aed* VI, 1, 6) and it was championed by the Arabs for centuries (Kramers, *Enzykl. d. Islam*, s.v. al Nīl.)

3. *Antichthonians*

This theory is an extreme case of the refusal to jettison obsolete geographical theories. Its adherents accepted that the Nile flowed from the far S. but could not believe that the river passed through the *διακεκαυμένη*. Their solution? Its *πηγαί* lay in the Counter-earth and the river flowed from there beneath the equatorial zone, even below Oceanus itself, to surface when it was safe! (Mela, I, 54; Honigmann, op. cit., 558 : cf. Nicagoras, *FgrH* 646, F. 1(7) and Eudoxus, Lasserre, *Die Fragmente des Eudoxos von Knidos*, F. 289).

4. *Southerners*

According to this doctrine the *πηγαί* lay in the Ethiopian Mts., a view largely the result of thinking on the causes of the inundation—in particular the general acceptance of the rôle of those mts. in causing it (e.g. n. II, 22). Ps. Arist. (*FgrH* 646, F.1(10)) speaks of *stagna* in Ethiopia which receive rain water and cause the Nile to flood but apparently considers the *πηγαί* to lie elsewhere. Arist. himself speaks of *ἕλη τὰ ἄνω τῆς Αἰγύπτου ὅθεν ὁ Νεῖλος* (*HA* VIII, 12, 2) which presumably means that *ἕλη* are the *πηγαί*. Eratosthenes (Str., XVII, 1, 2 (C786) ~ Berger, *Eratosthenes*, p. 302 ff.) speaks of theories according to which the Nile and its tributaries arose *ἔκ τινων λιμνῶν*. Later, a small expedition despatched by Nero to solve the problem once and for all reached the Sudd on the White Nile and claimed that the source lay there (Sen., *QN* VI, 8, 4; Cary-Warmington, *The Ancient Explorers*, p. 211 ff.). A certain Diogenes obtained information that the Nile rose from *λίμναι* (Ptol., *Geog* I, 9, 3-4; IV, 9, 3). These he placed much too near the Erythraean Sea but he probably contributed much to Ptol.'s view that the source lay in *τὸ τῆς Σελήνης ὄρος ἀφ'οὗ ὑποδέχονται τὰς χιόνας αἱ τοῦ Νείλου λίμναι* whose position fits well with those of the R. Kagera and Lakes Victoria and Albert (I, 17, 5; Cary-Warmington, op. cit., p. 214 ff.). Most subsequent classical and oriental views are based on this opinion (Honigmann, op. cit., 560 ff.) which is, in fact, not very far from the truth.

The problem of the *πηγαί* is much more complex than the ancients (and some moderns) realized since the R. Nile draws water from several quarters—the Atbara, Blue Nile and White Nile—each of which, in turn, has several sources. Consequently only a very general answer can be given. The sources of the Atbara lie in the hills to N. and E. of L. Tana (Hurst, *The Nile*, p. 101) while the Blue Nile begins as a small spring at the head of the R. Abbai which debouches into L. Tana. This spring was first seen by European eyes in 1613 when it was visited by the Portuguese priest Pedro Paez, though the district was not thoroughly explored until Bruce passed that way in 1771 (Hurst, op. cit., p. 92). The White Nile draws water from the river systems draining into L. Albert and L. Victoria, a connection first divined, if not demonstrated, by Speke in 1862, but to enquire which river or lake is *the* source of the White Nile would surely be quite absurd (Cary-Warmington op. cit., p. 214 ff.; Hurst, op. cit., pp. 132 ff., 149).

28. τοῦ δὲ Νείλου τὰς πηγὰς ... οὐδεὶς ὑπέσχετο εἰδέναι : Stage I. *ἱστορίη* (Introductory n. II, 28-34; Introduction, p. 81 ff.).

ἐν Σάϊ : Cf. II, 28, 59, 62, 130, 163, 169, 170, 175, 176; III, 16. Eg. *S3w*; Copt. ^{b}ⲥⲁⲓ; Ass. *Saja*; mod. *Sa el Hagar*. Capital of the 5th Nome of L.E. to the E. of the Canopic Branch c. 10 mls. N.E. of Naucratis and for that reason well known to the Gks. It was the home and, until the reign of Amasis, the capital of the kings of the XXVIth Dyn. and gave its name to the entire period.

Bibliography : (Topographical) Gauthier, *DG* V, p. 2; Kees, *RE* IA, 1758 ff.; *PM* IV, p. 46 ff.; Bonnet, *RÄRG* p. 646 ff.; Kees, *Ancient Egypt*, Index, s.v. Sais; Montet, *DG* I, p. 75 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 312 ff. (Historical) Hall, *CAH* III, p. 286 ff.; id., *Ancient History*, p. 500 ff.; Zeissl, *Äthiopen und Assyrer*, pp. 49 ff., 55; Kienitz. *Die politische Geschichte*, passim; Gardiner, *Egypt of the Pharaohs*, p. 352 ff.; Drioton-Vandier, *L'Égypte*^{4}, p. 574 ff.

ὁ γραμματιστὴς τῶν ἱρῶν χρημάτων : Vide Introduction, pp. 90, 91. This has an official ring to it and is probably a literal translation of the Eg. title *sš pr ḥḏ n Nt* "Scribe of the Treasury of Neith". At all events among the many officials attached to the treasury of Amon-rēʿ at Thebes we find a *sš pr ḥḏ n ʾImn* (Lefebvre, *Histoire des Grands Prêtres*, p. 53 ff.).

τῆς Ἀθηναίης : *Ἀθηναίη* is the Eg. goddess *Nt* (*Wb* II, p. 198, 9; Sethe, *ZÄS* 43 (1906), p. 144 ff.); Gk. *Νηίθ* "Neith" (Pl., *Ti* 21e; *PHib* I, 27, ll. 77, 165 ff.). In general, Kolta, *Gleichsetzung*, p. 96 ff.

ἔλεγε δὲ ὧδε ... ἐκ τοῦ μέσου τῶν ὀρέων τούτων ῥέειν : Cf. Pl., *Ti* 22d; Sen., *QN* IV, 2, 3 ff.; Aristid., *Or* 36, 47 ff. and contrast Str., XVII, 1, 52 (C819). The Egs. habitually placed the πηγαί of the Nile on their southern frontier—hence, in early times, in the Silsileh area (Sethe, *Urgeschichte*, § 151), later, with the extension of Eg. territory, at Assuan. By the 5th Century it was a hallowed tradition that the sources lay in the region of the First Cataract (Maspero, *BE* 7 (1898), p. 382 ff.; Wilcken, *Chr* p. 148 with *APF* 4 (1907-8), p. 554; Gauthier, *DG* V, p. 176; Barguet, *La Stèle de la Famine*, p. 18; Badawi, *Der Gott Chnum*, p. 26 ff.; Bonnet, *RÄRG* p. 525 ff.; Montet, *DG* II, p. 21; Raith, *Philologus* 111 (1967), p. 29 ff.), though the texts differ on the precise location, some speaking of Elephantine (Golénischeff, *RT* 13 (1890), pl. 1, col. 7; *BD* CXLIX; Barguet, op. cit., p. 18), others of the island of Senmut or Biggeh some distance upstream (Junker, *Götterdekret*, p. 37 ff.; Sethe, *ZÄS* 44 (1907), p. 17; Kees, *Ancient Egypt*, p. 184; Yoyotte, *RdE* 13 (1961), p. 104 ff.). The πηγαί are named as *Ṯpḥt* "the Cavern" (*Wb* V, p. 365, 11-17) or *Ḳrty* "the Two Holes" (ib., V, p. 58, 2-4).

H.'s topography poses grave difficulties. The data given are as follows:

(a) The πηγαί lie between two mountains with pointed tops.
(b) The two mountains lie between Syene and Elephantine.

Of these (b) cannot be right; for there is nothing between the two points which can be described as δύο ὄρεα ἐς ὀξὺ τὰς κορυφὰς ἀπηγμένα (Sourdille, *La Durée*, p. 219 & n. II, 29). Several explanations have been offered (ὄρεα = Konosso and Sehel—Stern, *ZÄS* 22 (1884), p. 54—or the cliffs and rocks of the cataract area—Wainwright, *JHS* 73 (1953), p. 106 ff.) but much the most promising is that of Barguet who points out that the Famine Stele from Sehel in the cataract region mentions the two gulfs (*Ḳrty*) at Elephantine and then proceeds (13 ff.) to speak of the Elephantine area in the following terms

> "There is in the midst of the river, covered with water in the period of the river's annual rejuvenation, a place of relaxation for all men on whose banks work on these stones is carried out (a list follows). There is also in the river facing the city of Elephantine itself, there is, I say, a central height, evil in itself, called 'Krofi of Elephantine' ".

These lines, which are not particularly clear, Barguet (p. 22, n. 4) relates to our passage. The "Krofi of Elephantine" (*grf 3bw*) is a place of evil (Copt. ⲭⲣⲟϥ Spiegelberg, *Koptisches Handwörterbuch*, p. 44) and is paralleled by the "place of relaxation" (*st snḏm n s nb*) which he takes to be Mophi, a name probably derived from Eg. *nfr*, Copt. ⲛⲟⲩϥⲓ "good". (The change from N to M presents no difficulty; for coupled names formed on a rhyming principle and inserting an "m" in the second e.g. *pêle-mêle* are common—vide Friedrich, *AOF* 20 (1963), p. 102).

This theory suits H. well; for it places the *πηγαί* of the Nile where the tradition of the scribe claimed that they lay and it provides a hill which is called *grf* close to the island of Elephantine. Two major problems do remain, however :

(a) The exact position of these rocks.
(b) The fact that the *st snḏm*, which Barguet claims to be Mophi, is low enough to be submerged by the inundation and hence would ill deserve the title *ὄρος*.

As for (a), the Famine Stele speaks of the *grf* as *m sty n nỉwt tn 3bw* "facing this city of Elephantine". If one were orientated southwards—and the ancient Egs. were (Sethe, *Ausdrücke*, passim; Posener, *NAWG* 1965, 2, p. 69 ff.)—it would be quite natural to use such an expression of the rocks barring the cataract to the S. There were many such (Wainwright, l.c. For plans and plates of cataract vide ***Description de l'Égypte, Atlas, Les Cataractes***, Flle. Ière; ib., ***Antiquités***, I, pl. 30, 31, 32 peaks and conical rocks. Description of the cataract ***Antiquités. Description***, I, p. 144 ff. Biggeh is surely too far S. to fit here). If this expression were translated into Gk. by the Saite scribe as e.g. *Ἐλεφαντίνης πέραν* (cf. *περαία*) that would orientate H. towards the river bank and that in turn would lead to his placing the rocks between Elephantine and Syene.

The second difficulty (b) can be met by considering that, even if Mophi were submerged during the inundation, at low water it would have risen several metres above the surface; for the height of the flood at Elephantine was 24-28 cubits (Barguet, op. cit., p. 19). It may then tentatively be suggested that the Krofi was a rock at the N. end of the cataract which was regarded as a particularly vicious hazard to navigation while Mophi was a large and relatively low rock, which was quarried at low water (*ỉr k3t n nn ỉnrw ḥr sprwy·s* is otherwise unintelligible to me) and constituted the last hazard to be negotiated before emerging from the cataract (hence ⲛⲟⲩϥⲓ > ⲙⲟⲩϥⲓ "the Good Place"). It is not a valid objection that, since H. had been to Elephantine, he could not have made the postulated mistake in orientation. If he heard the scribe's *λόγος* after returning from the S., he would not have been in a position to check it by observation and the labyrinthine complexity of the rocks and islands in the immediate vicinity of Elephantine may well have made it difficult to recall a clear picture of the topography (see further n. II, 29, 1).

καὶ τὸ μὲν ἥμισυ … ἐπ’Αἰθιοπίης τε καὶ νότου : The origin of this statement is an extremely violent counter-current which, in pre-barrage days, used to run S. above Assuan for a distance of 100 kms. It was known and used by sailors in modern times (Chélu, *Le Nil*, p. 67; v. Bissing, *RT* 32 (1910), p. 45; Boussac, ib. 37 (1915), p. 26; Kees, *Ägypten*, p. 28; Wainwright, *JHS* 73 (1953), p. 105 ff.).

ὡς δὲ ἄβυσσοί εἰσι αἱ πηγαί … ἐς βυσσὸν ἰέναι : The second experiment of Psammetichus (cf. n. II, 2). The appearance of P. in this rôle may be more than folk-tale; for there are many XXVIth Dyn. inscriptions in the cataract area (*PM* V, p. 245 ff.). It has been suggested that the tale embodies mythological elements :

(a) Sauneron (*BIFAO* 58 (1959), p. 35 ff.; 62 (1964), p. 40 ff.) points out that Khnum, the god of the First Cataract, was the patron of land surveyors (cf. Barguet. *CdE* 28 (1953), p. 223 ff.), and that there is evidence of a groma and surveying cord at Elephantine in the temple of the god (Barguet, *La Stèle de la Famine*, p. 20 ff.). He connects this cord with the *κάλος* of Psammetichus.

(b) Yoyotte (*RdE* 13 (1961), p. 104 ff.) offers the opinion that a sacred drama was performed at Philae which represented the weaving of a cord which was then cast into a symbolic abyss and unwoven by unseen assistants. Such a ritual is described by D.S. (I, 97, 2-3) at Acanthus in L.E. in connection with the Nile and was probably connected with the cult of Osiris (cf. Str. XVII, 1, 35 (C809)). The rite would portray the unfathomable profundity of the mysteries of the god's abyss.

Such suggestions are methodologically unsound; for the rope is an integral part of the tale. The story itself arises because of Psammetichus' mystique (vide II, 2) and the fact that the *πηγαί* were a notorious problem. Any attempt to sound them would necessarily involve a rope. Furthermore, (a) suffers from the objection that the rope of Khnum was a surveying rope while that of P. is used as plumb line, while (b) fails to convince because of the ethereal nature of the evidence for any such rite on Philae.

δίνας τινὰς ... καὶ παλιρροίην : There were many whirlpools in the cataract area e.g. Sheimat el Waḥ "The Whirlpool of the Oasis" 6 kms. S. of Shellal (Wainwright, op. cit., p. 106).

29. μέχρι μὲν Ἐλεφαντίνης : *Ἐλεφαντίνη* = Eg. *ꜣbw* "Elephant or Ivory Town" (*Wb* I, p. 7, 17-18); Aramaic יב *Yōbh* (*Berl. Aram. Pap. Elephantine*, passim); Copt. ⲓⲏⲃ, ⲓⲉⲃ; Gk. *Ἰηβ* (*OGI* 111, 16; 168, 45). The Gk. name is a translation of the Eg.—a rare phenomenon in H. who either transliterates, e.g. Sais (Eg. *Sꜣw*), Bubastis (Eg. *Pr Bꜣstt*), Tanis (Eg. *Ḏʿnt*) or uses a compound made up of the name of a hero or the city's main god + *πόλις* e.g. Heliopolis, Hermopolis, Archandropolis. A variety of explanations of the name is given but the most probable is that it reflects Elephantine's rôle as the terminus of the ivory road from the Sudan (Kees, *Ancient Egypt*, p. 308 ff.). It was the island capital of the most southerly nome in Egypt *Tꜣ sty*, the first of U.E. Syene on the east bank functioned as a suburb. II, 9, 2 tells us that the town was 1800 stades from Thebes; II, 175, 2 that it was 20 days from Sais.

Bibliography : Gauthier, *DG* I, p. 3; Hommel, *Ethnologie*, p. 755 ff.; Gardiner, *AEO* II, p. 2*; Steindorff, *RE* V, 2321 ff.; Kees, *Ancient Egypt*, p. 308 ff.; Montet, *DG* II, p. 15 ff.; *PM* V, p. 221 ff.

αὐτόπτης ἐλθών : Doubted by Aristid. (*Or* 36, 48 ff.) and Sayce (*JPh* 14 (1885), p. 257 ff.; id., *The Ancient Empires of the East*, p. 139, n. 7) :

1. *αὐτόπτης ἐλθών* does not occur in all manuscripts. Sayce, therefore, argues that it is an interpolation.
2. H. regarded Elephantine as a town, whereas it was, in fact, an island.
3. If H. had got as far as Elephantine he would have seen the monuments of Thebes and would not have been so brief in his account of that

city, especially when one bears in mind what he tells us of the Pyramids and the Labyrinth.

4. If H. had really questioned the people at Elephantine on the subject of the upper reaches of the Nile his information on the matter would be more precise than it is. In particular he would have refuted the false tale of the *πηγαί* of the Nile.

None of these arguments holds water :

1. By the rules of textual criticism it is much more likely that *αὐτόπτης ἐλθών* has fallen out of the MSS. than the reverse (Croiset, *REG* 1 (1888), p. 159 ff.).

2. Str. (XVII, 1, 48 (C817)) tells us that Elephantine *was* a town—a town on the island of Elephantine. It is also mentioned as such by Arr. (*An* III, 2, 7) (Croiset, op. cit.) and any visitor to the island will find plenty of ruins to prove the point.

3. The sketchy treatment of Thebes could be the result of any of a number of factors :

(a) H. may not have been interested in the temples of Thebes for some reason (Croiset, op. cit.). Mallet (*Les Premiers Établissements*, p. 431) and Hauvette (*Hérodote*, p. 16 ff.) point out that H. was not writing a travelogue. He was not concerned solely with the description of monuments but introduces them when they form the nuclei for ancient traditions. In the case of Thebes, the city is mentioned by accident in a discussion of the ancient religious and political history of Egypt. H. indicates the size of the temple (II, 143, 2 *τὸ μέγαρον ... ἐὸν μέγα*) and that is all the context permits him to do.

(b) H. elsewhere makes surprising omissions e.g. he certainly went to Phoenicia but omits a description of such strange cities as Tyre and Sidon (Croiset, op. cit.).

(c) When H. visited the city it was in a bad condition after centuries of war (Mallet, l.c.).

4. H.'s information on the area S. of the First Cataract is, within the compass of the work, as detailed as we should expect and any errors can easily be explained as the result of difficulties in obtaining information from native sources and in recording and assimilating it (Introduction, p. 77 ff.). As for the *πηγαί*, Sayce's objection is question-begging; for we

do not know *when* H. received the *λόγος* from the Scribe of Sais. It is perfectly possible that the conversation with him took place *after* H.'s visit to the First Cataract when vague memories and distance made verification impossible. For more ingenious solutions vide Mallet, op. cit., p. 409; Hauvette, op. cit., p. 16 ff.; Croiset, op. cit., p. 161, n. 4; Stein, *Herodot*, n. ad loc.; Sourdille, *La Durée*, p. 226 ff.

It is, then, clear that *all* the arguments which have been used to disprove H.'s visit to Elephantine can be answered and we conclude that there is no case against believing the phrase *αὐτόπτης ἐλθών*. In fact nowhere is it possible to prove that H. was a liar and until such a demonstration is forthcoming we have no alternative but to accept his good faith.

ἀπὸ Ἐλεφαντίνης ... διεκπλῶσαι : H. is clearly referring to the area of the First Cataract (so also Sourdille, op. cit., p. 230 ff.). He is, however, badly wrong on the length. For he assumes (2-3) that it extends from Elephantine to Tachompso (vide infra)—a distance which amounts to 12 *schoinoi* and demands 4 days' journey. In fact, the Assuan Cataract runs a distance of c. 6 kms. from Elephantine to the Island of Hesse and could be passed on foot in 4 hrs. (Sourdille, op. cit., p. 230).

ταύτῃ ὦν δεῖ τὸ πλοῖον διαδήσαντας ... ὑπὸ ἰσχύος τοῦ ῥόου : Navigation of the cataract was extremely difficult, not because the cataract itself was particularly large but because the whole area was filled with rocks which were extremely hazardous to shipping (Str. XVII, 1, 49 (C817-8); Denon, *Travels*, II, p. 143 ff.; Ball, *Description of the First or Aswan Cataract of the Nile*). To deal with the problem there was already a canal in the time of Senwosret III. He repaired it to facilitate the transportation of his forces through the obstacle (Sethe, *Lesestücke*, p. 85, no. 24a-b) and it was later used by Tuthmose I when returning from Nubia in Year 8. It was restored by Tuthmose III in Regnal Year 50 (Montet, op. cit., p. 22) and he gave the fishermen of Elephantine special instructions to keep it clear. S. of the Assuan Cataract as far as the Second Cataract at Wadi Halfa the river is navigable and free from rocky barriers (Lyons, *The Physiography of the River Nile*, p. 260).

σχοῖνοι δὲ δυώδεκά εἰσι οὗτοι τοὺς δεῖ τούτῳ τῷ τρόπῳ διεκπλῶσαι : The area known in later times as the Dodekaschoinos Eg. *Sḫt 'Itrw 12* (vide infra). At 1 schoinos = 60 stades (H., II, 6) 12 *schoinoi* amount approximately to 83 miles. Since this took 4 days, the ground was covered at an average of over 20 miles per day. By land this would be a very high average (vide infra) but it is quite clear that the figure must refer to river travel: I. This was the normal method. II. Despite his error in distance H. was aware that the journey from E. to Tachompso involved a boat (*τούτῳ τῷ τρόπῳ διεκπλῶσαι*).

Ταχομψώ : Eg. *Tkmsi*, Gauthier, *DG* VI, p. 36; other classical forms Kees, *RE* IVA, 2, 1987. The meaning is obscure and the name is probably un-Eg. Schäfer (*ZÄS* 41 (1904), p. 147 ff.) attempts to derive the element *Kompso* from Nubian *kamsu* "four" because of the four-day journey from Elephantine. The hieroglyphic writings suggest the currency of a false etymology "The Completion of 600 (sc. stades?)" (Kees, op. cit.; Griffith, *Cat. Dem. Graff. Dod.*, p. 15, n. 3). The exact location has given rise to some controversy :

(a) The Island of Djerar opposite Hierasykaminos (Weigall, *Report on the Antiquities of L. Nubia*, p. 92 ff.; Ball, *Egypt in the Classical Geographers*, p. 15, n. *; Sourdille, *La Durée*, p. 226, n. 1). This island is now generally inundated in the waters of the Assuan Dam but was described in Baedeker (*Egypt*^{7}, p. 397) as "large and well-cultivated". The evidence for identification is as follows :

(1) Eg. texts speak of Tachompso as being the southern limit of the Dodekaschoinos (Gauthier, l.c.; Kees, op. cit., 1988) and this point is known to have lain in the vicinity of Hierasykaminos (Gauthier, op. cit., I, p. 119; Wilcken, *Hermes* 23 (1888), p. 595; id., *APF* 2 (1902-3), p. 176; Schubart, *ZÄS* 47 (1910), p. 154 ff.; Hommel, op. cit., p. 757 ff.). Archaeological evidence confirms this, if needed (Shinnie, *Meroe*, p. 63).

(2) A form of the name appears to occur in inscriptions (L*D* Text, V, p. 79) and graffiti (Griffith, *Cat. Dem. Graff. Dod.*, p. 15 ff.) from Hierasykaminos in contexts which must mean that Tachompso was in the immediate vicinity (conceded even by Sethe, *ZÄS* 41 (1904), p. 58 ff.).

(3) The distances given from the First Cataract suit the vicinity of Djerar quite well (Ball, op. cit., pp. 14, 15, n. * where his figures,

converted to miles, are c. 75 miles for the real distance and c. 83 miles for that of H.).

This evidence proves that Tachompso lay near Hierasykaminos. H. tells us that it was an island. Since the nearest island is Djerar, the adherents of this theory argue, Tachompso must be Djerar.

(b) Tachompso is identical with Philae (Sethe, *Dodekaschoinos*, p. 3; id., *RE* V, 1256 ff.—recantation *ZÄS* 41 (1904), p. 61; Griffith, *BIFAO* 30 (1930), p. 127 ff.). The evidence of (a) renders a detailed refutation superfluous. The identification of Philae and Tachompso is out of the question but *confusion* between the two, i.e. conflation of data about both, is still possible. The following elements in H.'s description point to Philae :

I. H. describes Tachompso as lying at the end of the cataract; for only then does one cease to drag the boats.
II. H. tells us that Tachompso was occupied half by Egs. and half by Nubians (*Αἰθίοπες*) which suits Philae perfectly (cf. Str., XVII, 1, 49 (C818) where he describes the island as a *κοινὴν κατοικίαν Αἰθιόπων τε καὶ Αἰγυπτίων*. The cults were Eg. and Nubian (Bonnet, *RÄRG* p, 592 ff.; Montet, *DG* II, p. 21)).

Although, therefore, Tachompso and Philae are not identical, there is a strong case for believing that H. has confused the two and that confusion would explain his incredible information on the length the cataract (see also Griffith below where a similar view is expressed).

(c) Tachompso is a mainland site near Maharraga (Griffith, *Cat. Dem. Graff. Dod.*, p. 17). Griffith states that the island which H. is talking about is Philae whereas Tachompso at the end of the Dodekaschoinos lay on the mainland near Maharraga. He disapproved of the identification with Djerar for two reasons :

I. It was a shifting island.
II. It is without antiquities.

It is not clear exactly why these points should disprove the identity of Djerar and Tachompso; presumably Griffith finds the evidence of a divine cult at Tachompso ((a)2 above) and H.'s statements about the island inexplicable if one must assume that the site was Djerar.

However, Kees (*RE* IVA, 2, 1987) has a variant of this idea. He points out that, like modern Nubian place-names e.g. Kalabsche, the name T. belonged to a complex including settlements on both banks as well as an island which he believes to be Djerar. His evidence is :

I. The use of *κώμη* to refer to it in Aristagoras (*FgrH* 608, F.2 ap St. Byz. s.v. *Τάκομψος*).
II. Bion (ap Plin, *HN* VI, 178) refers to it as being on the E. bank.
III. Juba (op. cit., 180) refers to a Tachompsus on both banks, appending to his mention of that on the W. bank the words *eodem nomine Tacompsos altera sive pars prioris.*

This would suit the data of Griffith and (a) admirably .
(d) Tachompso is an island opposite Dakkeh (ancient Pselkis) (Schiaparelli, *Geog.*, p. 293, n. 343; Hommel, op. cit., p. 758).
(e) Tachompso = Qurta opposite the Wadi Allaki (Crawford, *The Fung Kingdom of Sennar*, p. 4). The case is not argued but *CIG* III, 5121 ~ Preisigke, *Sammelbuch*, 4119 proves that Qurta belonged to a district called *Κόμψη*. The only argument against this is that it does not suit the data of (a) as well as Djerar.

The facts, therefore, lead us to the following conclusion :

1. The Island of Tachompso was identical with Djerar.
2. There was a settlement on the mainland in the immediate vicinity bearing the same name.
3. H.'s statements on the island are the result of confusion between Philae and Tachompso.

Αἰϑίοπες : "Burnt-faces" (Frisk, *Griechisches etymologisches Wörterbuch*, I, p. 37). Cf. modern Arabic *Bilad es Sudan*, "Country of the Blacks" (Arkell, *History of the Sudan*, p. 1; Shinnie, *Meroe*, p. 13). The term *Αἰθιοπία* was used vaguely by H. to denote the entire area S. of Assuan (Sauneron-Yoyotte, *BIFAO* 50 (1952), p. 157, n. 3). In general Pietschmann, *RE* I, 1095 ff.; Lesky, *Hermes* 87 (1959), p. 27 ff.; Huber, *Artemis Lexikon*, 85 ff.; Helck, *KP* I, 201 ff.; Herminghausen, *Herodots Angaben über Äthiopien*, p. 2 ff.

ἔχεται δὲ τῆς νήσου λίμνη μεγάλη ... ἐκδιδοῖ : Whether regarded as referring to Philae or Djerar this statement could only indicate a broadening of the river as it passed on either side of the island (Hommel, *Ethnologie*, p. 758; Ball, *Egypt in the Classical Geographers*, p. 15, n. †; Gauthier, op. cit., IV, p. 220; id., V, p. 128).

τὴν πέριξ νομάδες Αἰθίοπες νέμονται : Beduin such as the Medjay, mod. Bedja (Säve-Söderbergh, *Ägypten und Nubien*, pp. 18, 145; Kees, *Ancient Egypt*, p. 308; Holt, *A Modern History of the Sudan*, p. 10 ff.), as distinct from the more cultured inhabitants of the valley who enjoyed a sedentary urban civilization of a high order (*οἱ ἄλλοι Αἰθίοπες* vide infra). For this distinction cf. Str. XVII, 1, 53 (819).

τὴν διεκπλώσας ... τῇ οὔνομά ἐστι Μερόη : From Djerar the Nile is navigable as far as the Second Cataract at Wadi Halfa, a distance of some 140 miles. Only after that do conditions occur which could be described as *σκόπελοι ... ὀξέες ... καὶ χοιράδες πολλαί ... δι' ὧν οὐκ οἷά τέ ἐστι πλέειν*. Presumably, therefore, behind the sentence *ἔχεται ... ἐκδιδοῖ* lurks the whole voyage from the vicinity of Hierasykaminos to the Second Cataract. After that as far as the Fifth Cataract navigation is usually hazardous and often impossible. From Wadi Halfa as far as Kermah, a distance of about 240 miles, there is no continuous navigation; for immediately S. of Wadi Halfa for 100 miles lies Baṭn el Ḥagar ("Belly of Rocks") which consists of a whole series of rocks and rapids impossible to negotiate except at the top of the flood and only then with the greatest difficulty and even past that conditions are far from easy. Beyond Kermah the river becomes navigable as far as Merowe for about 190 miles. From there for a distance of some 70 miles, including the Fourth Cataract, it is unnavigable except at the height of the flood and only becomes navigable again at Abu Hamed. From there it is possible at high Nile to travel as far as Meroë by water, a distance of c. 260 miles (Hurst, *The Nile*, p. 73 ff.; Lyons, *The Physiography of the River Nile*, p. 255 ff.; detailed charts illustrating the hazards Caillaud, *Voyage à Meroé*, pl. XLIV-LIII).

If we tabulate the information and compare it with H.'s statements we get the following results :

Table

Herodotus			*Approx. Actual Figures*	
2nd Cataract			2nd Cataract	
			240m.	No continuous navigation
			Kermah	
				Navigable
			Merowe	
				Generally unnavigable
40 days by land. On the basis of V, 53 average day's journey by land = $16^{1}/_{2}$ miles ⁂ 40 days = 660 miles	According to Crawford, (*The Fung Kingdom,* Appendix 10) 14.9 m.p. day is a good average in Africa. ⁂ 40 days by land = 592 miles i.e. c. 600 miles	c. 360 miles (Kees, *Ancient Egypt* p. 332)	Shirri Island	
			Abu Hamed	
12 days by boat = 12 × 20 miles + p. day (cf. II, 29, 3) i.e. c. 240 + miles			c. 260 miles	Entirely navigable at high Nile
Meroë			Meroë	

From this table two things are clear :

1. We are justified in assuming that the person or persons responsible for H.'s figures embarked for Meroë at or near the site of the modern Abu Hamed :

I. The distances in the last stage of the journey correspond closely on both sides of the table.
II. One would expect travellers to board ship as soon as possible and Abu Hamed is the first available point.

2. The distance deducible from H.'s 40 days' journey between the Second Cataract and what must be Abu Hamed, whether calculated on the basis of his own statements elsewhere or on the basis of modern experience, is not particularly far from the real distance. This suggests that H.'s informants did *not* take the Bab el Korosko route across the desert but the much less frequented path along the river valley, where for the most part travellers were compelled to travel by land.

ἥξεις ἐς πόλιν μεγάλην τῇ οὔνομά ἐστι Μερόη : There has been disagreement for decades over the city mentioned under this name. The two alternatives are :

(a) Napata, modern Gebel Barkal, below the Fourth Cataract. Near it there is today a town called Merowe.
(b) Meroë below the Sixth Cataract.

(a) is championed by V. de St. Martin (*Le Nord de l'Afrique*, p. 163), Maspero (*BE* 7 (1898), p. 389 ff.), Sayce (Garstang-Sayce-Griffiths, *Meroë*, p. 4, n. 1), Windberg (*RE* XVI, 1687) and Sauneron-Yoyotte (*BIFAO* 50 (1952), p. 176, n. 7). The case is as follows :

1. The measurements given by H. for the journey to Meroë are wrong but suit Napata quite well. Sayce uses the statement II, 30, 1 as proof of the confusion.

2. During H.'s time the centre of the IVth Dyn. of Napata lay in the Gebel Barkal area.

3. In the Tale of the Setem Khaemwese (Griffith, *Stories of the High Priests*, p. 56, n. 1.15) the king invokes *’Imn p3 k3 n Mrwy* "Amūn, Bull of Meroe". Sauneron-Yoyotte (op. cit.) consider this deity to be the same as *’Imn-r‘ k3 n T3 st(y)* or *’Imn-r‘ k3 n St* who was worshipped at Sanam opposite the present-day Merowe. If this identification is correct, the name Meroë is proved for the Gebel Barkal area at a time near that of H. and it becomes possible that H.'s Meroë could refer to Napata.

There are crucial objections to these arguments :

1. The distances given by H. *can* be interpreted in a way which suits Meroë quite well (vide supra).
2. The second argument appears to be quite false; for there is good evidence that Napata gave place to Meroë as the capital of the Kingdom of Kush in the 6th Century B.C. (Arkell, *History of the Sudan*, p. 145 ff.; Wainwright, *JEA* 38 (1952), p. 75 ff.; Shinnie, *Meroe*, p. 31 ff.; Gadallah, *Kush* 11 (1963), p. 199 ff.; Hofmann, *Studien zum meroitischen Königtum* p. 65 ff.) and H. says that *Μερόη* was the *μητρόπολις τῶν ἄλλων Αἰθ.*
3. It is by no means certain that the titles in question refer to the same god.
4. H. is almost certainly referring to Meroë in III, 18 ff. as indicated by the reference to the *τράπεζα τοῦ ἡλίου* which has been found on that site (Garstang-Sayce-Griffith, op. cit., p. 25 ff.; Bonnet, op. cit., p. 456). This makes it likely that he is doing so here.

We conclude, therefore, that H. is referring to Meroë above the Fifth Cataract.

This is the first occurrence anywhere of the name *Μερόη*. It does not appear in Eg. until the 4th Century when it is written *Brw* (*Urk* III, 131, 142) which becomes *Mrw* in Ptol. texts (Gauthier, op. cit., III, p. 12). The name appears to survive in the modern village of Begerawije (Hommel, op. cit., p. 744 ff.).

τῶν ἄλλων Αἰθιόπων : Vide n. II, 29, 4.

οἱ δ'ἐν ταύτῃ Δία θεῶν καὶ Διόνυσον μούνους ... τιμῶσι : Amūn (Zeus) was introduced into the country during the N.K. and held in very great honour by the Nubians (Säve-Söderbergh, op. cit., p. 201 ff.; Macadam, *Kawa*, I, p. 47; Arkell, op. cit., p. 104; Shinnie, op. cit., p. 141). In fact, Amūn of Pnubs, whose worship was centred at Napata, was the national god of the whole country (Sauneron-Yoyotte, op. cit., p. 163) and his cult is found, amongst other places, at Meroë (Griffith, *JEA* 4 (1917), p. 26). Temples in honour of various forms of the god are known from all parts of Nubia e.g. Amara, now destroyed (*PM* VII, p. 157 ff.), Kawa (op. cit., p. 180 ff.), Napata (op. cit., p. 203 ff.) and Meroë where his shrine attained the very considerable length of 450 ft. (op. cit., p. 236

ff.). Osiris (Dionysus) was certainly honoured in Nubia though evidence of particular enthusiasm for his cult at Meroë is not forthcoming (Hld., *Aeth* X, 2; *Urk* III, 136; Griffith-Thompson, *Dem. Mag. Pap. Lond. Leid.*, Text, p. 134 ff.; Erman, *ZÄS* 21 (1883), p. 94; Hintze, *Studien zur meroitischen Chronologie*, p. 11 ff.; Chamoux, *Kush* 8 (1960), p. 77 ff.; ib. 10 (1962), p. 335).

μούνους: Certainly not (cf. D.S., III, 9; Str., XVII, 2, 3 (C822)). There is archaeological evidence of Rēʿ, Apedemek and Isis (Shinnie, op. cit., p. 81 ff.). Note that there is no evidence that the so-called Temple of Apis (*PM* VII, p. 239) belonged to that god and there is no indication at all of his cult in the city (Lloyd, *JEA* 56 (1970), p. 196 ff.). When we bear in mind the marked *Märchen* flavour of the material on Ethiopia in III, 18 ff. this sort of inaccuracy will occasion no surprise.

καί σφι μαντήιον Διὸς ... καὶ τῇ ἂν κελεύῃ, ἐκεῖσε : Cf. D.S. III, 9; Hld., *Aeth* passim. The temple is mentioned in Plin., *HN* VI, 186. On Eg. oracles vide n. II, 83. The Meroitic state had a marked theocratic flavour from an early period and the power of Amūn waxed and grew great in Nubia long after it had fallen elsewhere. The tendency to theocracy found in Thebes from the N.K. onwards was taken to its logical conclusion in the S. where we have records of the god choosing kings (*Urk* III, 81 ff.; cf. D.S., III,5; Str., XVII, 2, 3 (C822)), of the king consulting the god before going to war (*Urk* III, 63, 8; Hofmann, op. cit., p. 27) and of the god participating in the initiation of a priestess (*Urk* III, 101 ff.). Sentiments are expressed in inscriptions which are almost verbal renderings of H.'s description (cf. ib. III, 22, 91).

In earlier times the oracular shrine favoured was that at Napata but eventually this was superseded by that of Meroë where the throne from which the god gave his pronouncements has been identified in the temple of Amūn (Garstang, *LAAA* 4 (1912), p. 47; Kees, *RE* XV, 1053).

Bibliography : Kees, *Ägypten*, p. 351 ff.; Bonnet, *RÄRG* s.v. *Napata*; *Meroe*; *Theokratie*.

30. **ἐν ἴσῳ χρόνῳ ἄλλῳ ... ἐν ὅσῳ περ ἐξ 'Ε ... ἐς τὴν μητρόπολιν τὴν Αἰθ. :** i.e. 56 days. Since the journey is imagined to be by river (πλέων), on the basis of II, 29, 3 the distance amounts to + 20 × 56 days =

+ 1120 miles (cf. II, 31, 1) which is not very far from the truth (Hurst, *The Nile*, p. 197).

ἐς τοὺς αὐτομόλους : Cf. Arist., *Rh* III, 16; D.S., I, 67; Str., XVI, 4, 8 (C770); XVII, 1, 2 (C786); Plin., *HN* VI, 191 ff.; Ptol., *Geog* IV, 20 ff.; Plu., *De Exilio* 7 (*Mor* 601); Hsch., s.v. *Μαχλοίονας*; Mela, III, 85. Locating this point is no easy task. H.'s figure is of little value for the purpose. The only possibility is to consider the geographical information found in Str. (l.c.), Plin. (l.c.) and Ptol. (l.c.).

(a) Str. informs us that the Deserters are identical with the *Sembritae* and states that they live in two areas :

  (1) A land called Tenessis deep in the hinterland of the port of Saba and not far from Meroë.
  (2) An island above Meroë. It is, however, clear that he is using the term *νῆσος* in a special sense; for in the same Ch. he tells us that Meroë itself is situated on an island and then informs us that this island is formed by the Astaboras (Atbara) and the Astapous (Blue Nile), i.e. *νῆσος* is being used in the sense of the Arabic *Gezīrah*. Ptol. employs the word in exactly the same way when discussing the district of Meroë (l. c.; cf. Str., XVII, 1, 2 (C786)).

(b) Plin.'s information is patently an extremely inept conflation of different accounts. The cause of the muddle is obvious. Some of the traditions referred to the Deserters under that name while others used the title *Sembritae/Semberritae*. Plin. clearly thought that the the Deserters, the *Sembritae* and the *Semberritae* were three different people—an error which detracts considerably from the coherence of his account. On the subject of the people whom he does recognize as the Deserters he tells us :

  (1) They inhabited a city to the W. of the Nile called Esar, 17 days upstream from Meroë (it is called Sapes by Bion) and another city called Diaron lies opposite to the E. of the river.
  (2) Their capital was called Sembobitis and lay on an island.
  (3) They inhabited a third city to the E. of the Nile.

On the Sembritae/Semberritae he tells us that they both lived on islands and that the Semberritae had a city called Asara.

(c) Ptol. gives the position of the cities Esēr and Daron. Esēr is certainly W. of Daron but their position on the Blue Nile is quite misrepresented because, unfortunately, Ptol.'s account of the geography of the Blue Nile, White Nile and Atbara is muddled. Probably his source thought of the Blue Nile as passing between Esēr and Daron as did Plin.

These are the data. The land of Tenessis is not identified—Str. is too vague. The suggestions of Treidler (*RE* VA, 1, 500 ff.) are pure guesswork.

Armed with this information we can now proceed to identify the Island of the Deserters. We need the next Gezīrah to the S. of that of Meroē. This is the area between the Blue and the White Nile known today as the Gezīrah on the N. tip of which stands Khartûm. There is good evidence for locating the towns mentioned in Plin. and Ptol. in this area and its immediate vicinity :

1. The great inscription of 'Ezānā, King of Axum (c. 325-375 A.D.) (Kirwan, *SNR* 20 (1937), p. 50 ff.; Arkell, *History of the Sudan*, p. 172 ff.) contains the following lines :

> "And I came to Kāsū (Cush) and fought a battle and captured prisoners at the junction of the rivers Sēdā (Nile) and Takkāzē (Atbara). And the next day I despatched the army Mahazā, and the army Harā, and Damawa and Falha and Serā up the Sēdā to raid the country and the cities built of bricks and of reeds. The cities built of brick were 'Alwa and Daro ...".

'Alwa is certainly Soba (Shinnie, *Meroe*, p. 57; Arkell, op. cit., p. 186) which lies to the E. of the Blue Nile with the Gezīrah to the W. and there can be no reasonable doubt that Daro is the town mentioned by Plin. and Ptol. as a centre of the Sembritae to the E. of the river. The context confirms this position and also permits the inference that it lay to the S. of Soba. With this one city pinned down to the E. of the Blue Nile and given Plin.'s statement that Esar lay opposite to it on the W. bank, we can place Esar on the W. bank of the Blue Nile within the Gezīrah and there must go Sembobitis as well.

2. Crawford (op. cit., p. 17) was able to point to ruins on the Blue Nile near Hasiheisa which he thought might well be those of Esar and Daro.

We conclude that the evidence points very strongly to the Blue Nile and Gezīrah as the Land of the Automoloi but there is still a problem.

H. said that it lay 56 days above Meroë. H. is certainly not to be trusted in such matters (Ball, *Egypt in the Classical Geographers*, pp. 11, 13-14) but this is a very extreme mistake. Perhaps a verbal misunderstanding was involved. He may have been told at Elephantine "It lies above Meroë a journey of 56 days", the speaker meaning *a journey of 56 days from Elephantine*, while H. understood him to mean that the land of the Deserters lay 56 days above Meroë.

Bibliography : Bunbury, *History of Ancient Geography*, I, p. 302; Mallet, *Les Premiers Établissements*, p. 77; Vivien de St.-Martin, *Le Nord de l'Afrique*, p. 24 ff.; Chaillé-Long, *L'Afrique Centrale*, p. 25 ff.; Schäfer, *Klio* 4 (1904), p. 152 ff.; Crowfoot, *The Island of Meroë*, p. 33; Sayce ap Garstang-Sayce-Griffith, *Meroe. The City of the Ethiopians*, p. 4; Fischer, *RE* IIA, 968 ff.; Treidler, *RE* VA, 1, 500 ff.; Wainwright, *SNR* 28 (1947), p. 11 ff.; Crawford, *The Fung Kingdom of Sennar*, pp. 2, 14 ff; Hurst, *The Nile*, p. 196 ff.

τοῖσι δὲ αὐτομόλοισι τούτοισι οὔνομά ἐστι Ἀσμάχ ... οἱ ἐξ ἀριστερῆς ... βασιλέϊ : The Deserters are given various names in classical writers—*Automoles* (Mela, III, 85; Hsch., s.v. *Μαχλοίονας*; Plin., *HN* VI, 191 uses Lat. equivalent); *Sembritae* (Str., XVI, 4, 8 (C770-1); XVII, 1, 2 (C786) who tells us that the word means "Foreigners"; cf. Plin., l.c.); *Μαχλοίονες* (Hsch., l.c., a corruption of *Ἀσμάχ* or *Ἀσμάχην*). Et. *Ἀσμάχ* (v. l. *Ἀσχάμ*) dub. :

1. De Horrack (*RA* 6 Series 2 (1862), p. 368 ff.) points to the Eg. *smḥy* "left" (*Wb* IV, p. 140, 10-15). This has an alternative form *sḥm* (Spiegelberg, *ZÄS* 43 (1906), p. 95; vide *Wb* l.c.). The one drawback is that the word never occurs in the texts in the sense "Deserter" (cf. Mallet, op. cit., p. 77, n. 4; Sethe, *Ausdrücke*, p. 204). Philologically, however, it is perfectly possible (de Meulenaere, op. cit., p. 42).

2. Spiegelberg (l.c.) was not prepared to accept this interpretation as it stood. In his view *Ἀσμάχ/Ἀσχάμ* ought to reflect the character of the entire episode and should mean "Deserter" or *sim.* He pointed to *sḫm*, *smḫ* "to forget" (*Wb* IV, pp. 140, 16-17; 141, 1-10). This idea was buttressed by several arguments :

(a) If we add "Lord" to this ("to forget one's Lord"), we could easily get the meaning "to desert". Certainly the word *sḫm* does not occur in the latter sense but it could easily develop from the basic meaning.
(b) Philologically this proposal is perfectly satisfactory since the Part.

Imp. Act. was probably vocalized *^{e}sḫ$^{\hat{a}}$m^{e}y—Hilfsvokal^{e}*> *ā*, unaccented *ej* falls away.
(c) The interpretation suits the tale.
(d) The two readings of the Gk. MSS. become justified.

The argument is then concluded by the suggestion that the translation "left" would arise from a popular etymology or the translation of a *ἑρμηνεύς* which connected *sḥmi* "left" and *sḫm* "to forget".

The basic assumption here is that the title *'Ασμάχ* was given to the Deserters after the event. It is, however, conceivable that it was a general term applied to the *Μάχιμοι* from the fact that the Gk. troops of Psammetichus were stationed on the right wing (vide Introduction, p. 22 ff.) and the less efficient native troops on the left. This would render S.'s interpretation superfluous.

3. Posener (*Princes et Pays*, p. 58 ff.) derives the name from *Nʿsmḫ*, a district in Nubia where he suggests the Deserters established themselves. De Meulenaere (op. cit., p. 42) regards this as attractive but not very convincing. I concur.

We must conclude that de Horrack's interpretation is still the most plausible.

οἱ ἐξ ἀριστερῆς χειρὸς παριστάμενοι βασιλέϊ : There is evidence to suggest that the left side was indeed regarded as less honourable than the right in Egypt (Gwyn Griffiths, *ASAE* 53 (1956), p. 146 ff.).

ἀπέστησαν ... ἤθεα μαθόντες Αἰγύπτια : The historicity of this episode was denied by Wiedemann (*Geschichte Ägyptens*, p. 136 ff.; *Kommentar*, p. 131 ff.) but there is positive evidence in favour (Maspero, *BE* 7 (1898), p. 400 ff.; de Meulenaere, op. cit., p. 41 ff.). The latter does, however, point out (op. cit., p. 43) that the tale has been embellished and that two elements have certainly been added by non-Egs. :

I. The number of the Deserters.
II. Their reply.

τέσσερες καὶ εἴκοσι μυριάδες : D.S. (I, 67) gives the figure as 200,000 +.

Αἰγυπτίων τῶν μαχίμων : Cf. II, 164, 2. These were troops of Libyan extraction. Their origin may well be reflected in the name *Μαχλοίονες* used for the *Αὐτόμολοι* in Hsch. (l.c.), since evidence exists of a Libyan tribe called the *Μάχλυες* (H., IV, 178 ff.; Plin., *HN* VII, 15). For the *Μάχιμοι* vide Introduction, p. 16.

ἐπὶ Ψαμμητίχου βασιλέος φυλακαὶ ... ἔν τε 'Ελεφαντίνῃ πόλι πρὸς Αἰθιόπων : The rôle of Elephantine in the defence of Egypt varied from period to period. During the O.K. it was the southern frontier and was fortified for that purpose. In the M.K. and N.K. when Eg. territory extended far into Nubia it lost its military importance. At the beginning of the XXVIth Dyn., however, Egypt's border lay at the First Cataract with the dangerous Meroitic Kingdom to the S. and consequently its military importance was considerable. The post also served to supervise imports and exports (De Meulenaere, op. cit., p. 38 ff.; bibliography ad II, 29, 1).

ἐν Δάφνῃσι τῇσι Πηλουσίῃσι ... πρὸς 'Αραβίων τε καὶ Συρίων : The most dangerous frontier of Egypt, fortified and carefully guarded for millennia. It was garrisoned by the best troops in Psammetichus' army, the Gks. (vide Introduction, p. 16 ff.), a fact certainly not lost on the *Μάχιμοι*. The enemy to be feared at this time was the Assyrians (*οἱ Συρίοι*) whom P. had just expelled from the country and, much less important, the nomads (*οἱ 'Αράβιοι*) who had for millennia infiltrated the E. Delta (De Meulenaere, op. cit., p. 33 ff.).

ἐν Μαρέῃ πρὸς Λιβύης ἄλλη : The restless Libyan tribes were a perennial problem and fortifications are known from an early period in the W. frontier (n. II, 18, 2).

ἔτι δὲ ἐπ'ἐμεῦ καὶ Περσέων κατὰ ταὐτὰ ... ἐν 'Ελεφαντίνῃ ... καὶ ἐν Δάφνῃσι : Contradiction between these two sentences. The reason why the Persians did not station a garrison in the W. Delta was that their western frontier extended into Cyrenaica and it would, therefore, have been superfluous (III, 13, 91; IV, 167; Kienitz, *Die politische Geschichte*, p. 55 ff.; Schäfer, *Klio* 4 (1904), p. 154, n. 2).

τοὺς ὦν δὴ Αἰγυπτίους ... τῆς φρουρῆς : D.S. (l.c.) and Plu. (l.c.) give different reasons :

1. Plu. ascribes their withdrawal to the temper of the king!
2. D.S. informs us that the Egs. were annoyed because the Gks. were given the place of honour on the right of the phalanx. Maspero (*The Passing of the Empires*, II, p. 500, n. 2), Spiegelberg (*ZÄS* 43 (1906), p. 95) and Gwyn Griffiths (op. cit.) regard this as an interpretation of H.'s explanation of the term *Ἀσμάχ*. This *may* be so (though vide Introduction, p. 22 ff.) but the basic idea that they deserted because they were annoyed at the preference shown to the Gks. is surely correct (Maspero, *BE* 7 (1898), p. 398 ff.; Mallet, *Les Premiers Établissements*, p. 77: Hall, *CAH* III, p. 293; Kienitz, op. cit., p. 40; Meyer, *GdA* III, p. 146; de Meulenaere, op. cit., p. 41 ff.).

Ψαμμήτιχος δὲ πυθόμενος ἔδιωκε ... καὶ τέκνα καὶ γυναῖκας : Cf. Arist., *Rh* III, 16; D.S., I, 67, 3 ff.; Plu., *De Exilio* 7 (*Mor* 601).

οὗτοι ἐπείτε ἐς Αἰθιοπίην ἀπίκοντο ... τῷ Αἰθιόπων βασιλέϊ : This statement has been seen in a number of different lights :

(a) Maspero suggested (*BE* 7 (1898), p. 401; cf. Kienitz, op. cit., p. 40) that the Deserters may have expected the Ethiopian king to march N. and reinstate them in their former honourable position.
(b) De Meulenaere (op. cit., p. 43) offers the opinion that the *Μάχιμοι* may have harboured an affection for Tanut-amūn, the King of Ethiopia and erstwhile Pharaoh of Egypt, and had, therefore, followed him S. soon after P. had conquered U.E.

ὁ δέ σφεας τῷδε ἀντιδωρέεται ... τὴν ἐκείνων γῆν οἰκέειν :
In the reign of Anlamani (623-593 B.C. (Hintze)) we hear of an expedition against the Bedja who had been raiding Kawa and other settlements on the Nile (Macadam, *Kawa*, I, p. 46 ff. with n. 37) and a number of campaigns are mentioned in the records of King Amani-nete-yerike (431-405 B.C. (Hintze)) (cf. Macadam, op. cit., p. 50 ff.). The Excommunication Stele (*Urk* III, 108 ff.) indicates religious differences in Ethiopia whilst the Stelae of Harsiotef (cf. 404-369 B.C. (Hintze)) (*Urk*

III, 114 ff.) and Nastasen (cf. 335-310 Hintze) (ib., 137 ff.) show Ethiopian Kings perpetually at war with their neighbours and rebellious vassals. Later difficulties on the S. frontier are mentioned by Wainwright (*SNR* 28 (1947), p. 18). This evidence makes it quite clear that conditions beyond the First Cataract were unstable enough to satisfy H.'s description.

τούτων δὲ ἐσοικισθέντων ἐς τοὺς Αἰθίοπας ἡμερώτεροι ... ἤθεα μαθόντες Αἰγύπτια : That the civilization of Ethiopia was an off-shoot of that of Pharaonic Egypt is true but its development goes back far beyond the 7th Century. Egs. were settled in the country as early as the O.K. and during the N.K. the whole country as far as the Fourth Cataract became an Eg. province and was thoroughly Egyptianized. Even after the collapse of Eg. authority at the end of the 2nd Millennium her cultural influence continued and formed the basis of the Meroitic Civilization which flourished in Nubia during H.'s lifetime.

Bibliography : Budge, *The Egyptian Sudan*, 2 vols.; Säve-Söderbergh, *Ägypten und Nubien*; id., *Kush* 4 (1956), p. 54 ff.; Arkell, *A History of the Sudan*²; Shinnie, *Meroe*; Drioton-Vandier, *L'Égypte*⁴; Emery, *Egypt in Nubia*, p. 123 ff.; Zyhlarz, *Kush* 6 (1958), p. 7 ff. These are the basic surveys and constitute a key to the complete bibliography for the history of Egypt S. of the First Cataract.

31. Μέχρι μέν νυν τεσσέρων μηνῶν ... τοῦ ἐν Αἰγύπτῳ ῥεύματος : This figure simply gives the time consumed by the journey in round figures. The contradiction with II, 30, 1 means nothing.

ῥέει δὲ ἀπὸ ἑσπέρης τε καὶ δυσμέων : Interpreted in two ways :

1. The Nile in the vicinity of the Automoloi flows from W. to E. (Rawlinson, *Herodotus*, II, p. 46 quoting Wilkinson; Waddell, *Herodotus II*, p. 152; Wainwright, *SNR* 28 (1947), p. 16).
2. The *entire* course of the Nile outside Egypt runs from W. to E. (Bunbury, *History of Ancient Geography*, I, pp. 266, 303; How-Wells, *Commentary*, I, p. 176).

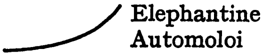
Of these the second is the more likely :

(1) In the preceding two sentences H. has been talking of the whole of

the Nile S. of Elephantine. It is, therefore, natural to assume that he is doing so here.

(2) In II, 33, 2 H. expresses the conviction that the Nile is an exact counterpart of the Danube. The course of the Danube is regarded as running from W. to E. H. must, therefore, regard the course of the Nile in the same light (Bunbury, op. cit.; cf. Stein, *Herodotos*, II, p. 36).

It would, however, be a mistake to press the direction too strongly and imagine that to H. the Nile turned sharply westwards at Elephantine. He probably thought of its course as gradually trending westwards in a curve S. of that point until it ran due west in the latitude of the Automoloi thus



(cf. Introductory n. II, 28-34; n. II, 32).

τὸ δὲ ἀπὸ τοῦδε ... ὑπὸ καύματος : The earth was regarded as being flat and apparently roughly divided into a series of concentric zones. According to an idea current as early as the time of Hec. the whole world was surrounded by a belt of desert. This is mentioned by H. in the extreme limits of India (III, 98, 102, 105; IV, 40), Ethiopia (here and IV, 185) and Europe (V, 9). Next to the desert areas lived the *Fabelvölker* of Gk. story, e.g. in the N. the Arimaspians and Hyperboreans, in the S. the *Σκιάποδες* (*FgrH* I, F.327) and the Homeric Pygmies (op. cit., F.328). Inside these dwelt the four great *Randvölker*—the Celts in the W., the Scythians in the N., the Indians in the E. and the Ethiopians in the S. The different character of these zones is clearly the consequence of the gradual fading and ultimate disappearance of geographical knowledge as distance from the Mediterranean area grew progressively greater.

Bibliography : Jacoby *FgrH* I, F.193, 194, 327, 328 with Kommentar; id., *RE* VII, 2708 ff.; Gisinger, *RE* SB IV, 532 ff.; Ninck, *Die Entdeckung von Europa*, p. 38; Thomson, *History of Ancient Geography*, p. 97 ff.; Berger, *Geschichte der wissenschaftlichen Erdkunde*, p. 77 ff.; van Paassen, *The Classical Tradition of Geography*, p. 117 ff.

32. ἀνδρῶν Κυρηναίων : Vide Introduction, p. 116 ff.

ἐπὶ τὸ Ἄμμωνος χρηστήριον : Cf. n. II, 42, 4. Zeus Ammon was the major god of Cyrene in H.'s time. The period of his introduction coincides with the incorporation of Cyrene into the Persian Empire when it and the Oasis of Siwa were brought for the first time into the same *Macht-*

gebiet. Doubtless the construction of a huge temple of Zeus on a hill N.E. of the old town c. 520-490 B.C. reflects this movement (Chamoux, *Cyrène*, p. 320 ff.; Parke, *Oracles of Zeus*, p. 202 ff.).

Νασαμῶνας ἄνδρας : Probably more correctly *Mes*amones (Plin., *HN* V, 33), since *Mes-* occurs as a prefix in other Berber names (Windberg, *RE* XVI, 2, 1776). Ensconced above the S.E. end of Syrtis Major, S.W. of Euesperides, W. of the Auschisae and N. of the *Ψύλλοι* (H., IV, 172-3; Ps. Scyl., 109 ~ *GGM* I, p. 84; D.S., III, 49; Str., II, 5, 33 (C131); XVII, 3, 20 (C836); Plin., *HN* V, 33), they lived from their flocks and the dates which they obtained in the Augila Oasis and supplemented their income by plundering wrecked ships (Sil., I, 408 ff.; III, 320 ff.; Zonar., XI, 19; D.P., 208 ~ *GGM* II, p. 113), a habit which goaded Roman authorities into sending several expeditions against them until they were finally subdued by the Praetor Flaccus in 86 A.D. and driven far inland where they are mentioned by Ptol. (IV, 5, 21) and Tab. Peut. (Against Windberg who insists that Zonar.'s mention of them on the coast invalidates both these sources. There is no telling what information Z. used. It could easily have been centuries out of date).

They were probably Libyan Hamites (Windberg, op. cit., 1776), and, since they observed the curious custom of wearing feathers on their heads (Bates, *The Eastern Libyans*, p. 130, n. 1), they were probably identical with the *Ṯmḥw* who loom so large in Eg. texts (vide n. II, 18, 2).

Bibliography : Bates, *The Eastern Libyans*, Index, s.v. Nasamones, Nasamonian youths; Gsell, *Hérodote*, p. 124 ff.; id., *L'Afrique du Nord*, V, p. 82 ff.; Chamoux, *Cyrène*, Index, s.v. Nasamons; Leglay, *KP* III, 1578 ff.; Windberg, *RE* XVI, 2, 1776 ff.; Desanges, *Cat. des Trib. Afr. Ant. Class.*, p. 152 ff.

Ἐτεάρχῳ : Parke (op. cit., p. 205) considers that *Ἐτεάρχος* was the Gk. corruption of a native name. It is, however, more likely that it is pure Gk.; for not only did Gks. frequently visit the area but they actually settled there. A tomb representation at Siwa depicts such an expatriot who had taken the Eg. name Si-Amūn and accepted Eg. ideas of the After-life (Introduction, p. 118).

τῷ Ἀμμωνίων βασιλέϊ : Siwa was certainly not taken by Cambyses (H., III, 26; Gsell, *Hérodote*, p. 144 ff.) but Darius probably did control it :

1. He would have needed to make up for the check sustained by Cambyses.
2. He built extensively in the Oasis of Kharga.
3. Dinon (*FgrH* 690, F.23) mentions that the Oasis of Siwa paid tribute to the Persians.
4. The Persian administration was particularly interested in the caravan trade (Meyer, *Der Papyrusfund von Elephantine*, p. 23 ff.; Mallet, *Rapports*, p. 21 ff.; Chamoux, op. cit., p. 338).

The *βασιλεύς* in question may have been a Persian vassal or Siwa may have shaken off Persian control at the time in question (Parke, op. cit., p. 205 ff.).

ἀνδρῶν δυναστέων : "Chieftains" (Powell, *Lexikon*, p. 94, b, s.v. *δυνάσται*), "chief men" (*LSJ* p. 453, a, s.v. *δυνάστης* II), "Sheikhs" (Cary-Warmington, *The Ancient Explorers*, p. 218). H. (IV, 159, 168) also mentions *βασιλεῖς* amongst the Libyans. Later writers speak of *δυνάσται* (D.S., III, 49, 3; App., *Pun* VI, 33, 41, 44), *βασιλεῖς* (D.S., III, 49, 2; XIII, 80, 3; Nic. Dam., *FgrH* 90, F. 103(s), 123), *ἄρχοντες* (Procop., *Vand* II, xi, 15, 37, 47; xiii, 19), *principes* "tribal chiefs" (the standard term in Latin inscriptions of the imperial period for African tribal chiefs), *reguli*, "kinglets" (Liv., XXVII, 4, 9; XXIX, 4, 4; Amm., XXIX, 5, 2), *reges* (Amm., XXIX, 5, 46; *CIL* VIII, 2615, 5-7, not frequent). In fact at the end of the 2nd Millennium the *Lbw* were commanded by hereditary princes. Even in antiquity the Berber term *guellid*, *aguellid* "chief, prince, king" already occurs (Gsell, op. cit., p. 200). Nobles are also mentioned (*πρῶτοι*, *εὐγενεῖς*, *nobiles*, *illustriores*, *proceres*, *primores*, Gsell, op. cit.). The plural suggests that the Nasamonians were organized into a loose system of tribes each with its own chief.

τῆς γὰρ Λιβύης ... καὶ ἔρημος πάντων : More fully IV, 168-199. H.'s geography of Africa may be summarized as follows :

(a) There were four races—*Φοίνικες* and *Ἕλληνες* (*ἐπήλυδες*), *Λίβυες* and *Αἰθίοπες* (*αὐτόχθονες*). The Ethiopians occupied the S. coast of Africa on the outer sea (III, 17) and the Libyans, except for Gks.

and Phoenicians, the N. with their W. frontier at *Σολόεις ἄκρα* (II, 32; cf. Ps. Scyl., 112 ~ *GGM* I p. 93).

(b) Africa was divided by the Nile (II, 31-4).

(c) The N. section was divided into 4 zones :

(1) *ἡ οἰκουμένη ~ οἱ παραθαλάσσιοι* (II, 32; IV, 181).
(2) *ἡ θηριώδης Λιβύη* (II, 32; IV, 181).
(3) *ἡ ὀφρύη ψάμμης* (IV, 181).
(4) *ἡ ἔρημος* (II, 32; IV, 181 & 5).

These zones are ten days' journey wide (IV, 183).

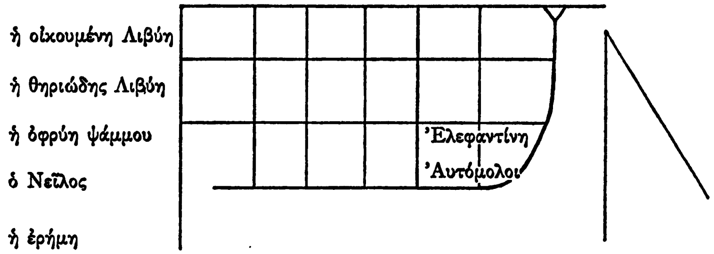
(d) The first zone is divided into a W. and an E. half by L. Triton, W. Libya being inhabited by *ἀροτῆρες Λίβυες* (IV, 191) and E. Libya by *νομάδες κρεοφάγοι τε καὶ γαλακτοπόται* (IV, 186).

(e) Only one race, the *Γαράμαντες*, inhabits *ἡ θηριώδης Λιβύη*.

(f) In the third zone H. mentions a series of oases (*κολωνοὶ ἁλός*) running E.-W. and at intervals of 10 days as far as the Pillars of Herakles (IV, 184).

(g) The zones are linked for geographical purposes by N.-S. series of tribes and place-names e.g. Nasamonians-Augila-Garamantes and Garamantes-Lotophagoi (IV, 183).

The inference suggests itself that H. is using a highly schematized geographical system, probably a map which was constructed on markedly mathematical lines. N.W. Africa was probably regarded as approximately oblong, bounded to E. and S. by the Nile and further divided into 4 zones, the first 3 of which at any rate were divided into squares 10 days × 10 days in area. Such a scheme would derive largely from Hec. (Jacoby,



RE VII, 2727 ff.; id., *FgrH* I, F.329-357 with Kommentar, p. 371 ff.; Honigmann, *RE* XIII, 1, 153 ff.).

ψάμμος τέ ἐστι καὶ ἄνυδρος δεινῶς καὶ ἔρημος πάντων : The ὀφρύη ψάμμης of IV, 181. The description is developed *ad nauseam* by the historians of Alexander (cf. D.S. XVII, 50, 1; Arr., *An* III, 3-4). Dunes (ψάμμος) occur extensively in great longitudinal bands S. of the Siwa Depression. N. of that, however, they give way to vast plateaux (*serir*, *hamada*) covered with pebbles of all dimensions patinated by erosion (Passarge, *Die Urlandschaft Ägyptens*, p. 6; Hume, *The Geographical Journal* 58 (1921), p. 252 ff.; Leclant, *BIFAO* 49 (1950), p. 196 ff.).

ἐπεὶ ὦν ... κροκοδείλους : Observe that the tale has come to H. *via* several intermediaries. Mistakes are, therefore, probable. Interpretations of the passage have taken two courses :

1. Hennig (*RhM* 83 (1934), p. 206 ff.) believed that the Nasamonians could not have carried enough food for more than three weeks and could only have risked using half of this before turning back. Starting from the Oasis of Augila they could, therefore, only have reached the Wadi esch Scherki or Schergi in the Fezzan, a distance of 700 kms. Even to get as far as this they would need to kill game and use natural water. The wadi in question is 220 kms. long, runs E. and is occasionally filled with water. There is also a considerable salt marsh in the area and a species of lizard $1^{1}/_{2}$ m. long similar to the crocodile (the desert monitor *Varanus arenarius*). H., IV, 192 mentions these animals simply as κροκόδειλοι and probably used the term more loosely than we should do (Brehm, *Tierleben*, VII, p. 155). There is also evidence of the presence of crocodiles in the Fezzan during antiquity (Hennig, *Terrae Incognitae*, p. 127 ff.). There are crucial objections :

(a) The Γαράμαντες inhabited the Fezzan which was included in ἡ θηριώδης Λιβύη. Therefore, by this theory, the Nasamonians could have got no further than this zone. H. makes it quite clear that they went much further.
(b) The Fezzan, as far as is known, has never been inhabited by pygmies (ἄνδρας σμικρούς, μετρίων ἐλάσσονας ἀνδρῶν ... χρῶμα δὲ μέλανας).

2. Most scholars have accepted H.'s claim that the Nasamonians crossed the desert and have usually identified the W.-E. running river as the Niger (Bunbury, *History of Ancient Geography*, I, p. 270 ff.; Gisinger, *RE* SB IV, 571; Windberg, *RE* XVII, 1, 199; Cary-Warmington, op. cit., p. 218). Rhys Carpenter, however, argues for the Bodele Depression N.E. of L. Chad (*AJA* 60 (1956), p. 213 ff.) :

(1) H., IV, 181-5 is describing the trans-Saharan caravan route W. from Thebes. This route runs Thebes-Kharga-Baharia-Marmarica Depression-Augila. H. mentions Siwa (IV, 181, 2)—Augila (IV, 182, 1). 10 days W. of Augila will not bring travellers to an oasis but 10 days to the S.W. will lead to the collection of oases known as the Fezzan and the starting point of the modern route to Equatorial Africa *via* Tibesti. The violence to H.'s *πρὸς ζέφυρον ἄνεμον* should not distress us unduly. The ancients are careless in such matters (Bunbury, op. cit., p. 168 ff.) and the tale is third-hand anyway (vide supra). The direction might even be the result of inference (Introductory n. II, 28-34). H.'s next oasis (IV, 183), the home of the Garamantes, is clearly the Fezzan (cf. IV, 174). He also refers to Tibesti where the Tibbu observe the curious customs and nomenclature mentioned by H. (IV, 184, 1), and the strange mountain called *Ἄτλας* (184, 3) fits Emi Tusside perfectly.
(2) Since the Nasamonians lived in the vicinity of the Augila Oasis, any expedition into the hinterland would take them along this route.
(3) This route runs ultimately into sub-Equatorial Africa and the description of the place which they reached proves that they got that far.
(4) The Bodele Depression suits perfectly. It is now dry but in antiquity was occupied by a large, shallow, swampy sea full of crocodiles and hippopotami and *watered from the W.* by the Baḥr el Gazal flowing from L. Chad (Tilho, *The Geographical Journal* 56 (1920), p. 258; Nachtigal, *Sahara und Sudan*, II, p. 77 ff.).
(5) The Makari of the Logone area S.E. of L. Chad had a great reputation as magicians (vide n. II, 33, 1).

Carpenter clearly has the solution. We might further add that pygmies, who now inhabit the Congo area, were found much further N. in anti-

quity until they were pushed into the forests by advancing negroes (Junker, *Almanach der Wiener Akademie der Wissenschaften für das Jahr* 1920, Vienna, 70, p. 289 ff.; Watermann, *Bilder aus dem Lande des Ptaḥ und Imḥotep*, p. 55 ff.). It is, therefore, possible that the Bodele Depression was inhabited by these people. Further, the distance, which so troubled Hennig (vide supra), is no obstacle to this theory. For regular oases were found at intervals of approximately 10 days and even he admits that the Nasamonians could travel such a distance without difficulty. It should, in any case, be noted that the inhabitants of the desert can perform formidable feats of endurance e.g. four days Baharia to Sittrah on a *gullah* of water (Rohlfs, *Drei Monate in der libyschen Wüste*, p. 197 ff.; Seligman, *Egypt and Negro Africa*, p. 67 ff.); 3-4 days across the desert without water on dry salted cheese (Leclant, op. cit., p. 209).
Conclusion : The Nasamonian itinerary ran Augila-Fezzan-Tibesti-Bodele Depression.

Bibliography : Bunbury, *History of Ancient Geography*, I, p. 268 ff.; Hennig, *RhM* 83 (1934), p. 206 ff.; id., *Terrae Incognitae*, I, p. 127 ff.; Treidler, *Herodots Reisen und Forschungen in Afrika*, p. 101 ff.; Gisinger, *RE* SB IV, 571; Windberg, *RE* XVII, 1, 199; Cary-Warmington, *The Ancient Explorers*, p. 218 ff.; Rhys Carpenter, *AJA* 60 (1956), p. 231 ff.

33. γόητας εἶναι ἅπαντας : Nachtigal refers to a striking parallel amongst the inhabitants of the Logone region S.E. of L. Chad, the area which the Nasamonians probably reached. "Niemand zweifelt daran, dass jeder Makari-Mann ein Zauberer sei" (*Sahara und Sudan*, II, p. 533 ff.).

καὶ δὴ καὶ ὁ λόγος οὕτω αἱρέει : Here the emphasis of H.'s argument is placed firmly on *γνώμη*, though the clinching proof is based on analogy. Argument *κατ'ἀναλογίαν* was a methodology of cardinal importance in early Gk. thought (Diller, *Hermes* 67 (1932), p. 14 ff.; Lloyd, *Polarity and Analogy*, p. 172 ff.) and played no mean rôle in geography (Gisinger, *RE* SB IV, 562, 570, 581; Dion, *RPh* 42 (1968), p. 34; Thomson, *History of Ancient Geography*, pp. 89, 100, 278; Ninck, *Die Entdeckung von Europa*, pp. 45 ff., 49, 54, 80), dominating the speculations of Anaximand. and his disciple Hec. who considered the *Erdinsel* to be a disc divided symmetrically into two continents which corresponded even in details, so that the Danube could be considered the symmetrical counterpart of the Nile (Introduction, p. 126 ff.). H. has passed far beyond this (nn. II, 16, 21, 23) but the old "Drang nach Symmetrie" (Ninck) can still make itself felt in a secondary rôle when, as here, material is available to give some justification to the concept of a symmetrical arrangement (Introductory n. II, 28-34).

Ἴστρος τε γὰρ ποταμὸς ἀρξάμενος ... κατοικημένων : Cf. IV, 49, 3. There are 3 problems :

1. The location of the *Κελτοί*.
2. The location of *Πυρήνη*.
3. H.'s picture of the upper course of the Danube.

1. The *Κελτοί*. Probably first mentioned in Hec. (*FgrH* I, F.54-6 with Kommentar). There are the following data for localizing them :

(a) H.'s statement that they live *ἔξω Ἡρακλέων στηλέων*.
(b) H.'s statement that they are the neighbours of the *Κυνήσιοι/Κύνητες* who are the westernmost people in Europe.
(c) Statements of Avien. et al. on the geography and ethnography of Spain.
(d) Philological analysis of proper-names in Avien. and later writers.
(e) Archaeological material.

(a) must mean that the *Κελτοί* live W. of the Straits of Gibraltar.
(b) suggests that the *Κυνήσιοι/Κύνητες* live in the far W. of Spain, a suggestion rendered certain by
(c) the fact that the *Κυνήσιοι* (IV, 49, 3 *Κύνητες*) are described in Avien. (*Or Mar* 195 ff.) from a source possibly older than H. (Schulten, *Fontes*, I, Introduction, p. 5 ff.; Berthelot, *Avienus*, pp. 73, 135 ff., 139 ff.; Bosch-Gimpera, *CQ* 38 (1944), p. 54; Lambrino, *Bull Et Port* 19 (1956), p. 6 ff.; Fuhrmann, *KP* I, 788; Gisinger, *RE* SB IV, 551; Stichtenoth, *Ora Maritima*, p. 10 ff.) as running from the Guadiana area to C. St. Vincent and N. as far as the R. Mira, though the position of the cities of *Con*imbrigae and *Con*istorgis suggests that they once extended much further N. (Jullian, *REA* 7 (1905), p. 375; Hübner *RE* IV, 1906 ff.; Schulten, op. cit., I, p. 88 ff.; Berthelot, op. cit., p. 74; Lambrino, op. cit., p. 15; Dion, *RPh* 42 (1968), p. 8). To the N. they were bordered by the Cempsi and other tribes

and to the E. by the Tartessians. There is also evidence in Avien. of Celtic occupation of the coast between the Cynetes and Tartessians (Bosch-Gimpera, *PBA* 26 (1940), p. 97; Lambrino, op. cit., pp. 7 ff., 17 ff.).

(d) The name of the Sefes to the N. of the Cempsi who dwelt to the N. and E. of the Cynetes is Celtic as are those of other tribes extending N. and E. as far as the Pyrenees (Bosch-Gimpera, op. cit., passim; Lambrino, op. cit., passim).

(e) Throughout Spain and Portugal characteristic Celtic archaeological material survives (Bosch-Gimpera, *EC* 5(1950-1), p. 396 ff.; Gomez-Moreno, *Miscelaneas*, pp. 38 ff., 79 ff.; Savory, *Spain and Portugal*, pp. 227 ff., 239 ff.).

This evidence suggests that there were Celtic tribes living on the frontiers of the Cynetes in S.W. Spain N. and E. of the Algarve and it has generally been assumed that H. is referring to the Sefes and Cempsi (Schulten, op. cit., I, pp. 88, 93; Berthelot, op. cit., p. 71; Lambrino, op. cit., p. 10 ff.). Further, since H. almost certainly owes his information on W. Spain ultimately to Phocaean merchants trading to Tartessus (Lambrino, op. cit., p. 5; Schulten, op. cit., II, p. 28) it is probable that his extremely cursory statements here concern only the coastal area. Thus *οἱ δὲ Κελτοί ... κατοικημένων* implies a sequence along the coast—Straits of Gibraltar-Celts-Cynetes = furthest W. before doubling C. St. Vincent and sailing N.

Finally, since Avien. actually preserves traces of occupation of the coast by the Cempsi (vide supra), we can be confident that it is this extension of the tribe which H. has particularly in mind. Such an interpretation is easier than assuming that H. is referring to the people directly N. of the Cynetes as does Dion (op. cit., p. 8).

Bibliography (Celts in Spain) : Jullian, *REA* 7 (1905), p. 375 ff.; Schulten, *Fontes*, I, pp. 5 ff., 88 ff., 93; II, p. 28; Berthelot, *Avienus*, Index, s.v. Cynetes; Bosch-Gimpera, *PBA* 26 (1940), p. 25 ff.; id., *CQ* 38 (1944), p. 53 ff.; Gomez-Moreno, *Miscelaneas*, p. 38 ff.; Bosch-Gimpera, *EC* 5 (1950-1), p. 352 ff.; Maluquer ap Pidal, *Historia de España*, I(3), p. 5 ff.; Lambrino, *Bull Et Port* 19 (1956), p. 5 ff.; Lopez Cuevillas, *La Civilización Céltica en Galicia;* Sangmeister, *MDAI(M)* 1 (1960), p. 75 ff.; Dion, *RPh* 42 (1968), p. 7 ff.; Savory, *Spain and Portugal*, p. 239 ff.; Fischer, *MDAI(M)* 13 (1972), p. 109 ff.

2. *Πυρήνη* (Mela, II, 81ff.; Plin., *HN* III, 8; Avien., *Or Mar* 558 ff.;

St. Byz., s.v. *Κυρήνη* for which read *Πυρήνη*; Jacoby, *FgrH* I, Kommentar, p. 333). Suggestions for the site of this city fall into two categories :

(a) It lay in the vicinity of the real sources of the Danube.
(b) It lay in the vicinity of the Pyrenees.

(a) This idea is based on the *assumption* that H.'s information on the Danube was fundamentally correct :

I. The name *Πυρήνη* is connected with the names of the Rivers Brigen/Brigach and Pregen, two sources of the Danube, an idea suggested as early as the 16th Century by the German scholar Henricus Loritius Glareanus (Wirth, *PhW* 63 (1943), 311 ff.). The idea is also advocated by Hopfner (ib. 54 (1934), 368) and Ersch and Gruber (*Encyklopädie*, s.v. Danubius). Pearson (*CPh* 29 (1934), p. 328 ff.) following Wheeler (*The Geog. of Herodotus*, p. 175) claimed, on the basis of these names, that Pyrene was identical with a Celtic settlement near the sources of the Danube. Wirth (l.c.) also favoured this view, pointing to the Celtic name Brigobonne on the Peutingerian Map.

II. Bergk (*Gr. Literaturgeschichte*, IV, p. 272 ff.) considered that Pyrene was an old name of the Black Forest and that when the Iberians (sic!) were driven from the area they took the name with them. Hec., H.'s alleged source, took the name as applying to the Black Forest while H. was unsure where it was.

This solution is open to the following objections :

1. H., III, 115 suggests that neither he, nor Hec., nor any other source available had accurate information on W. Europe. It is, therefore, unlikely that either had sound information on the upper reaches of the Danube.

2. Similarity to modern place names is not, by itself, a cogent argument. One's reserve is increased by the fact that *Πυρήνη* has been claimed not only as Celtic (Hopfner, l.c.) but also as E. Mediterranean (Schulten, *Iberische Landeskunde*, p. 173).

(b) On the basis of Avien. (op. cit., 558 ff.) many scholars place *Πυρήνη* somewhere on the eastern extremity of the Pyrenees. The data are as follows :

(1) The scheme of Avien. demands that *Πυρήνη* should lie somewhere in the N.W. angle of the Med. coast.

(2) The city lies on the boundaries of the Sordi, certainly the S. boundary, which probably ran along the N.E. foothills of the Pyrenees (Berthelot, op. cit., p. 111 ff. with chart opposite p. 120; Grosse, *RE* XXIV, 1, 13 ff.).

(3) From Gibraltar to Pyrene is a journey of 7 days for a swift ship. This could mean anything between 7-8000 stades.

(4) The *harenae litoris Cynetici* lie to the N. of *Πυρήνη* with the R. Roschinus running through them. This must refer to the coast running N. from Collioure N.W. of Port Vendres (Berthelot, op. cit., p. 112 ff.).

These data are of limited value. 1 is vague. 2 is more useful, since, to judge by other evidence, the boundary of the Sordi is approximately correct. 3 is very imprecise. Does it mean 7 days and 7 nights or 6 nights and 7 days? What are we to take as the average distance covered? H. (IV, 86, 1) gives 1300 stades for a *nychthemeron* but what allowance do we make for a *celer ratis*? 4 is not precise.
At all events, there are the following suggestions :

I. Elne area, probably near St. Cyprien, close to the point where the R. Tech flows into the sea (Berthelot, op. cit., pp. 112, 132). The case is not clearly argued but there are apparently two motives :

(a) Datum 2.

(b) Avien. gives the distance from Gibraltar to Pyrene as 7 days' journey which B. relates to the distance of 7000 stades between the two points indicated by Ps. Scyl., 2. This amounts to about 1300 kms., the distance according to B. between Gibraltar and the Tech.

Argument (a) is satisfactory but (b) is not. The connection with Ps. Scyl. seems unlikely since it would suppose a *nychthemeron* of 1000 stades—which makes nonsense of Avien.'s *cursus est celeri rati.* In addition, finding a satisfactory site for a port is not easy (admitted by Berthelot, op. cit., p. 112).

II. Portus Pyrenaei (Liv., XXXIV, 8, 5), mod. Port Vendres (d'Arbois de Jubainville, *RA* 3 Series 12 (1888), p. 61; Glotz, *Hist. Grecque,* I, p. 198; Jacoby, *FgrH* I, Kommentar, p. 333; Dion, *RPh* 42 (1968), p. 9) on the basis of the name and general suitability of the site to the data in the literary tradition.

This suits data 1, 2 and 4. It has, in addition, the name *Portus Pyrenaeus* to recommend it.

III. Cadaques area (Schulten, *Fontes*, I, p. 115; II, p. 28) for the following reasons :

(a) It satisfies datum 2.
(b) It has a safe port.
(c) It has easy access to the hinterland.
(d) Context suggests that *Πυρήνη* was the first port in Spain founded by Massilia before the foundation of Emporium and Rhode.

This suits 1 but accords with 2 and 4 less well than the above. There is, further, no indication in Avien. that *Πυρήνη* was in Spain.

IV. Rosas (Grosse, op. cit., 13; Schulten, *Iberische Landeskunde*, p. 172) for the following reasons :

(a) It satisfies datum 2.
(b) It has a safe harbour.
(c) There is easy communication with the hinterland.
(d) Avien. mentions the close connection with Massilia. Rhode is the most northerly of known Massiliote *emporia* on the E. coast of Spain and is in exactly the right position.

Same objections as III above.

We conclude that such evidence as there is favours *Portus Pyrenaei* as the site of H.'s *Πυρήνη*.

Bibliography : Wheeler, *The Geography of Herodotus*, p. 175; Ersch-Gruber, *Encyklopädie*, s.v. Danubius; d'Arbois de Jubainville, *RA* 3 Series 12 (1888), p. 61 ff.; Bergk, *Griechische Literaturgeschichte*, IV, p. 272 ff.; Schulten, *Fontes*, I, p. 115; II, p. 28; Glotz, *Histoire Grecque*, I, p. 198; Berthelot, *Avienus*, pp. 112, 132; Hopfner, *PhW* 54 (1934), 368; Pearson, *CPh* 29 (1934), p. 328 ff.; Schulten, *RhM* 85 (1936), p. 322 ff.; Wirth, *PhW* 63 (1943), 311 ff.; Schulten, *Iberische Landeskunde*, p. 172 ff.; Grosse, *RE* XXIV, 1, 13 ff.; Dion, *RPh* 42 (1968), p. 9 .

3. H. appears to believe that the sources of the Danube lay in Celtic territory in the vicinity of the E. Pyrenees near a town called *Πυρήνη*

(similarly Arist., *Mete* I, 13 (350b); cf. Ps. Scymn. 773 ff. ~ *GGM* I, p. 227; Procop., *Aed* IV, 5).

Much the most plausible solution to this dilemma is that of Dion (*RPh* 42 (1968), p. 7 ff.) who argues as follows :

1. There is evidence of a trans-European trade route running Danube-Save-Po-Alps-N. edge of Pyrenees to the Atlantic.
2. H. had heard at Istria of this route in terms like "The Danube route leads to the Pyrenees" and this was taken to mean that the Danube itself ran that far (cf. Str.'s trans-Asiatic Cydnus (I, 3, 1 (C47)) and Arist.'s Tartessus (*Mete* I, 13 (350b)) for similar errors. Eridanus (H., III, 115) and Narbo (Plb., III, 37, 7-8) also reflect transcontinental trade routes).
3. H.'s ignorance of the geography of Central and N. Europe would have made this mistake easy.
4. H.'s knowledge of journeys up the Nile (II, 29-31) would lead him to believe that any deviation *κατὰ γῆν* which a traveller might make from the river would only be temporary.

Bibliography : D'Arbois de Jubainville, *RA* 3 Series 12 (1888), p. 61 ff.; Bergk, *Griechische Literaturgeschichte*, IV, p. 272 ff.; Jacoby, *FgrH* I, Kommentar, p. 333; Pearson, *CPh* 29 (1934), p. 328 ff.; Dion, *RPh* 42 (1968), p. 7 ff.

τῇ 'Ιστρίην οἱ Μιλησίων οἰκέουσι ἄποικοι : Name varies—coins of 4th-2nd Century *'Ιστρίη* (Vulić, *RE* IX, 2268); *"Ιστρος* (Arist., *Pol* V, 5 (1305b); Ps. Scymn. 767 ff. ~ *GGM* I, p. 227, normal in Roman times—Str., VII, 5, 12 (C318); App., *Ill* 30—though sometimes aspirated *Histros* Amm., XXII, 8, 43; Eutr., VI, 10); *'Ιστρία* (Arr., *Peripl. M. Eux.* 35); *(H)istr(i)opolis* (Plin., *HN* IV, 44, 78, 79; Mela, II, 22; *Tab. Peut.* VIII, 4). The earliest Gk. colony in the Danube area founded 657 B.C. according to tradition (Helm, *Die Chronik des Hieronymus*, p. 95b) and late 7th-early 6th Century according to excavation (Dimitriu-Coja, *Dacia* N.S. 2 (1958), p. 69 ff.). Its Milesian origins are confirmed by :

1. Unanimity of tradition (Str., VII, 6, 1 (C319); Ps. Scymn. l.c.; Plin., op. cit., 44).
2. The large number of Milesian colonies in the Black Sea area (Danoff, *RE* SB IX, 1055 ff.; Bilabel, *Philologus* Supp. XIV (1920), p. 11 ff.; Glotz, *Hist. Grecque*, I, p. 165 ff.; Bengtson, *GrG* p. 88 ff.).
3. Inscriptions defining relations between Miletus and Istria (Rehm-

Kawerau, *Das Delphinion. Milet*, I, 3, nos. 136-7; Lambrino, *Dacia* 3-4 (1927-32), p. 398).

4. Large quantities of "Rhodian" and Chian pottery which is generally associated with Miletus (Boardman, *The Greeks Overseas*, pp. 251, 258).

The city does not in fact stand at the mouth of the Danube but c. 40 kms. to the S. beside one of the lagoons of the Dobrudja. There is at present a village there called Istere.

Bibliography : Pârvan, *Dacia* 2 (1925), p. 198 ff.; Lambrino, M., ib. 4 (1932), p. 362 ff.; Lambrino, S., ib., p. 378 ff.; Condurachi, ib. N. S. 1 (1957), p. 245 ff.; Dimitriu-Coja, ib. N.S. 2 (1958), p. 69 ff.; Danoff, *RE* SB IX, 1082 ff.; Spoerri, *KP* II, 1477 ff.; "Materiale si Cercetari Arh.", *Histria* I-; Boardman, *The Greeks Overseas*, p. 257 ff.; Pippidi, *VIII Congrès International d'Archéologie Classique*, Paris, 1963 (1965), p. 332 ff.

34. ἡ δὲ Αἴγυπτος ... ἡ δὲ Σινώπη ... κεῖται : A crude and quite erroneous attempt at a meridian (Berger, *Geschichte der wissenschaftlichen Erdkunde*, p. 92; Thomson, *History of Ancient Geography*, pp. 98, 100, n. 1), anticipating the Olbia-Rhodes-Alexandria meridian of later geographers (vide Thomson, op. cit., pp. 163 ff., 208; Berger, op. cit., p. 421 ff.; id., *Eratosthenes*, p. 189 ff.; Gisinger, *RE* SB IV, 562, 600 ff.; Kubitschek, *RE* X, 2052 ff.; Ninck, *Die Entdeckung von Europa*, p. 65). It will be based on two things :

(a) Travellers' information.
(b) Symmetrical geography (n. II, 33).

A similar attempt appears to be the N.-S. progression Colchis-Persis (I, 104; IV, 37; Jacoby, *FgrH* I, F.289 with Kommentar).

35. Αἰγύπτιοι ἅμα τῷ οὐρανῷ ... ἤθεά τε καὶ νόμους : Echoed at S., *OC* 337 ff. H.'s concept of environmental determinism is Hippocratic (Introduction, p. 165 ff.), the canonical statement being the treatise *De Aer* (*in primis* XII-XXIV) which concludes that the major factors responsible for national differences are

1. *αἱ μεταβολαὶ τῶν ὡρέων* (H.'s *τῷ οὐρανῷ τῷ κατὰ σφέας*).
2. The nature of the water supply (H.'s *τῷ ποταμῷ φύσιν ἀλλοίην παρεχομένῳ τοῖσι ἄλλοισι ἀνθρώποισι*).

The Hippocratic writer's summation *εὑρήσεις γὰρ ἐπὶ τὸ πλῆθος τῆς χώρης τῇ φύσει ἀκολουθέοντα καὶ τὰ εἴδεα τῶν ἀνθρώπων καὶ τοὺς τρόπους* agrees very well with H.'s statement that it is the Eg. *ἤθεα* and *νόμους* which are determined by the peculiarities of their environment. Amongst later Gk. thinkers Posidon. emphasized the cardinal importance of climate (ap Str., II, 2, 3 (C95 ff.)) and Str. concurs (II, 5, 26 (C127); XV, 1, 24 (C696)). See also Procl. (*In Ti* 50b), who attributes to Panaetius and other disciples of Pl. the idea that a mild climate is the mother of wisdom.

Bibliography : Nestle, *Herodots Verhältnis*, p. 13; von Brunn, *Gesnerus* 3 (1946), p. 151ff.; ib. 4 (1947), pp. 1 ff., 65 ff.; Jacoby, *Geographische Beobachtungen und Anschauungen im Corpus Hippocraticum*, Diss. Jena, 1928; Sigerist, *History of Medicine*, II, pp. 247, 280ff.; Gaujac, *Strabon et la Science de son Temps*, p. 270 ff.

ἐν τοῖσι αἱ μὲν γυναῖκες ἀγοράζουσι : Representations of women making purchases in the market place are not unknown in the O.K. (L*D* II, pl. 96, 103) but there is no hard and fast rule at this time since in the first example men also are shown making purchases while in other representations (Capart, *Recueil* I, pl. XIII; v. Bissing, *Gem-ni-kai*, I, pl. XXII; Capart, *Rue de Tombeaux*, II, pl. XXXI-II) it is exclusively men who are involved. There is no M.K. evidence. The N.K. material shows only men (Klebs, *NR* p. 230 ff.) but the surviving representations are so few that no general conclusions can be drawn. We have no other evidence but it seems likely that H.'s comment correctly reflects a general trend in the 5th Century if nothing else. In Athens it was the men who frequented the agora (Lacey, *The Family in Classical Greece*, p. 168 with pl. 36).

καὶ καπηλεύουσι : There is in H. a clear distinction between *ἔμπορος* and *κάπηλος*. The first is involved in foreign commerce, the second is an inland-trader (Knorringa, *Emporos*, p. 23). The small retailers in Egypt were not necessarily women. Male *κάπηλοι* occur in the O.K. (L*D* II, pl. 96; Klebs, *AR* p. 116); a N.K. wall painting in the tomb of Ḳenamūn shows both men and women in charge of small booths (Klebs, *NR* I, p. 231 ff.; Davies-Faulkner, *JEA* 33 (1947), pl. VIII; *PM* I^2, 1, p. 275 ff.) and H. actually contradicts himself elsewhere since male *κάπηλοι* are indicated in II, 141, 4 and II, 164, 1 states that they formed an entire class. Women traders were also known at Athens (A., *Ra* 858, 1350-1;

Pl 427 ff.; *Lys* 457 ff., 564; *V* 493 ff.; *Th* 387, 449 ff.; cf. D., LVII, 30).

οἱ δὲ ἄνδρες κατ'οἴκους ... : Men undoubtedly plied the weaver's craft in Egypt during the N.K. and later (Mariette, *Cat. Gén. Mons. Ab.*, 1175 and 1187; Brunner, *Die Lehre des Cheti*, 7, 3-4; *D'Orbiney*, I, 2 ~ Gardiner, *LES* p. 9; Tomb of Nefer-renpet ap Johl, *Altägyptische Webestühle*, fig. 39), a fact which was probably due to the introduction at that time of the double-beamed vertical loom (Klebs, *NR* p. 187; Ling Roth, *Ancient Egyptian and Greek Looms*, p. 14 ff.; Winlock, *Rise and Fall*, p. 166). Previously only the horizontal type had been employed and these were worked by women (Winlock, *Models of Daily Life*, p. 29 ff.). Since this type continued in use in the N.K. (Lucas-Harris *AEMI*[4] p. 141 ff.; Johl, op. cit., p. 57; Klebs, *NR* I, p. 185), women will probably still have been so employed but, although tomb models show both men and women in the weaving shops during that period (Winlock, *Models of Daily Life*, p. 30), the latter are never depicted working at the looms themselves.

In Greece a different type of vertical loom called the warp-weighted loom was employed and all the representations which we have show women engaged in this craft (Hoffmann, *The Warp-Weighted Loom*, p. 297 ff. who rightly emphasizes (p. 322) that there is no evidence *whatsoever* from Classical Greece to prove the existence of any other type there).

ὑφαίνουσι δὲ οἱ μὲν ἄλλοι ἄνω ... Αἰγύπτιοι δὲ κάτω : This refers to the different methods of "beating in" (*ὠθέω*) the weft (*κρόκη*) by means of the "beater-in" or "sword-beater" (*σπαθή*) which the different construction of the warp-weighted and the double-beamed loom demand.

The warp-weighted by its very structure demanded that the weaving should be done from the top downwards by a person standing up for the purpose. Each time that the weft was passed through the warp threads, i.e. each time a "strike" was made, it was necessary to drive the weft home. This was done by means of a rod called the "beater-in" which would force the thread into position against that immediately above by being pushed upwards (*ἄνω*). This type of loom was not only standard in Greece but was widely current throughout the Med. area and also in N. Europe where it is found from early times until its disappearance in

Iceland less than a century ago (Singer-Holmyard-Hall, *History of Technology*, I, p. 427; Hoffmann, op. cit., p. 114 ff.; Forbes, *Studies*, IV, p. 199 ff.). It is, therefore, hardly surprising that H. regarded the practice of "beating-in" upwards as the standard practice.

The Egs. used the much more advanced vertical double-beamed or tapestry loom. With this instrument the warp threads are stretched between two horizontal beams in such a way that they are kept completely parallel. This means that it is possible to weave, i.e. pass the weft threads through the warp threads, from the bottom—a practice which has the immense advantage that the weaver can sit down to do the job. This in turn meant that the warp threads were applied one on top of the other and were necessarily beaten-in from above or, as H. puts it, "downwards" (*κάτω*).

Bibliography : Johl, *Altägyptische Webestühle*; id., *Die Webestühle der Griechen und Römer*; Ling Roth, *Ancient Egyptian and Greek Looms*; Braulik, *Altägyptische Gewebe*; Winlock, *Models of Daily Life*, p. 29 ff.; Lucas-Harris, *AEMI*[4] p. 140 ff.; Singer-Holmyard-Hall, *History of Technology*, I, p. 425 ff.; II, p. 211 ff.; Hoffmann, *The Warp-Weighted Loom*; Ling-Roth, *Primitive Looms*[3]; Forbes, *Studies*[2], IV p. 198 ff.; id., *Rayon Revue* 7(6) (1953), p. 267 ff.

τὰ ἄχϑεα οἱ μὲν ἄνδρες ἐπὶ τῶν κεφαλέων ... γυναῖκες ἐπὶ τῶν ὤμων : The pictorial evidence at our disposal does not bear out this distinction:

O.K. Men and women carry burdens on their heads (Klebs, *AR* p. 31, fig. 18).

M.K. Men carry burdens on their shoulders (Newberry, *Beni Hasan*, I, pl. XXIX; II, pl. VI). Men carry burdens on their shoulders while women carry them on their heads (Klebs, *MR* p. 182, fig. 131). Wooden statuettes show women carrying baskets etc. on their heads (Vandier, *Manuel*, III, pl. 49, 1-4, 7; pl. 50, 1-4; pl. 51, 1-3). Men and women carry burdens on their heads (op. cit., pl. 52, 3).

N.K. Women carry baskets on their heads (Wreszinski, *Atlas*, I, pl. 232). Men carry burdens on their shoulders (Wreszinski, op. cit., pl. 63, 75, 317, 319, 320) or both on head and shoulder (Capart, *Lectures on Egyptian Art*, p. 130, fig. 89).

οὐρέουσι αἱ μὲν γυναῖκες ... κατήμενοι : It is certainly true that oriental males urinate in a crouching position (Borchardt, *Z. für Bauwesen* 66 Jahrg. (1916), 542) but this technique was not unknown in Greece (Hes., *Op* 731 ff.).

εὐμαρείῃ χρέωνται ἐν τοῖσι οἴκοισι : Evidence is not extensive but it is clear that the Egs. had arrangements which made this possible :

1. Toilets are included in the mastaba tombs of the Archaic Period next to the bedrooms (Kees, *Ägypten*, p. 87, n. 3).
2. Toilets were discovered in houses at El Amarna (Peet-Woolley, *City of Akhenaten*, I, pp. 7, 18, 46; Ricke, *Der Grundriss des Amarna-Wohnhauses*, pp. 16, 59, 68 and particularly p. 35; Borchardt, op. cit., fig. 41-48 with discussion 542 ff.).
3. There is a toilet in the palace at Medinet Habu (Vandier, *Manuel*, II, 2, p. 766).
4. Toilets are indicated in models of the O.K. (Honigsberg, *J Eg Med Ass* 23(4) (1940), p. 1).

The majority of houses presumably did not have fixed installations (Grapow, *Grundriß*, III, p. 8) and many will have used *chaises percées* such as that discovered by Schiaparelli (*La Tomba intatta dell' Architetto Cha*, p. 117, fig. 99).

General discussion Ghalioungui, *Magic and Medical Science in Ancient Egypt*, p. 154 ff.

H.'s astonishment presumably arises from the contrast with Gk. practices. Evidence from Greece is extremely limited. The only latrines of the classical period known are at Olynthus (mid-4th Century) and there they are uncommon. Presumably the Gks. of H.'s time used *ἀμίδες* on a large scale (mentioned Ar., *Th* 485; *V* 805 ff. Examples excavated Robinson-Graham, *Excavations at Olynthus*, VIII, pl. 55, 1 & 1a; Talcott, *Hesperia* 4 (1935), p. 495 with fig. 16, nos. 72-3) and were not as prudish about concealment.

Bibliography : Robinson-Graham, *Excavations at Olynthus*, VIII, *The Hellenic House*, p. 205 ff.

ἐσθίουσι δὲ ἔξω ἐν τῇσι ὁδοῖσι : The houses of wealthier Egs. certainly boasted dining rooms (Borchardt, op. cit.; Peet-Woolley, op. cit., I, p. 37 ff.; Ricke, op. cit.; Davies, *MMS* 1 (1929) pp. 33 ff.) and they doubtless took some of their meals inside (Klebs, *MR* figs. 19, 20-22; Davies, *El Amarna*, VI, pl. XXVIII) but the poorer Eg. would tend to eat in the open (vide Klebs, *AR* p. 106, fig. 87; *D'Orbiney* I,9 ~ Gardiner, *LES* p. 10). As throughout this section we are faced with over-schematization.

ἱρᾶται γυνὴ μὲν οὐδεμία ... πάντων τε καὶ πασέων : At first sight astonishing but H. means that no woman in Egypt *performs the divine cult of any deity* or occupied the pre-eminent rôle in worship which would make her equivalent to what he would call a *ἱρείη* in Greece. Eg. priestesses could perform any of three functions :

1. Impersonate a goddess for ritual purposes.
2. Constitute a god's harîm (*ẖnrt*). As such they participated in certain ceremonies as singers and dancers (*šmʿyt*). This was their most important rôle.
3. Adorn divine images with flowers etc.

There is, however, no evidence whatsoever that in H.'s time they would participate in rites and functions analogous to those which could be performed by Gk. priestesses and regarded as inseparable from that office :

(1) Sacrifice.
(2) Care for the fabric of the temple.
(3) Ensuring that visitors behaved in a decent and orderly fashion.
(4) In smaller temples concern for financial administration.

Bibliography : Eg. priestesses, Blackman, *JEA* 7 (1921), p. 8 ff.; id., *HERE* X, p. 295; Kees, *Ägypten*, p. 260 ff.; id., *Das Priestertum*, pp. 5, 162 ff., 166; Erman-Grapow, *Ägypten*, p. 335 ff.; Erman, *Die Religion*, pp. 201 ff., 319 ff.; Montet, *Everyday Life*, p. 279; Sauneron, *Les Prêtres de l'Ancienne Égypte*, p. 65 ff.; Bonnet, *RÄRG* p. 607 ff.; Vandier, *La Religion Égyptienne*², p. 174 ff.

Gk. priestesses, Woodhouse, *HERE* X, p. 302 ff.; Gigon, *Artemis Lexikon*, 2431 ff.

τρέφειν τοὺς τοκέας ... καὶ μὴ βουλομένῃσι : Quite correct for H.'s time. The Wisdom Texts give a clear picture of male obligations in this respect; for they frequently exhort the aspiring young official to show piety to his parents and to nourish them when they are old but the duty was a moral one and not enforceable in law i.e. it was not *ἀνάγκη* (Volten, *Zwei altägyptische politische Schriften. Die Lehre für König Merikare*, 35; id., *Das demotische Weisheitsbuch*, p. 152 ff.; id., *Studi Rosellini*, II, p. 273; Suys, *La Sagesse d'Ani*, XII, XXXVIII; Wilcken, *Aegyptiaca. Festschrift für Georg Ebers*, p. 143; Lange, *Amenemope*, V, 7-8; Glanville, *Instruction of Onchscheshonqy*, p. 19, 6). Although, however, these texts are so insistent on filial piety, they did recognize circumstances which could absolve a man of his obligations and give rise to the situations which must lie at the bottom of H.'s statement. P. Insinger, for example, (Volten, *Das demotische Weisheitsbuch*, 2, 17 ff. with n. ad loc.) states that the moral obligation which a person has to his parents ceases if the parents are worthless. He is then entitled to abandon them. Women, on the other hand, at least in later times, were bound by law to support their fathers if not their mothers (Seidl, *Atti IImo Congr. Intern. di Pap., Milan 1965*, p. 149 ff.). In Classical Athens the situation was very different. The failure of a son to discharge his filial obligations was an offence actionable under a *γραφὴ γόνεων κακώσεως* and punishable by *ἀτιμία* (Lacey, *The Family in Classical Greece*, p. 116 ff.; Harrison, *The Law of Athens*, I, p. 77).

36. **οἱ ἱρέες τῶν ϑεῶν τῇ μὲν ἄλλῃ κομῶσι, ἐν Αἰγύπτῳ δὲ ξυρῶνται :** Cf. II, 37, 2. Although even in the O.K. baldness was characteristic of certain types of priests (Sethe, *ZÄS* 57 (1922), p. 24), it did not become compulsory until the L.P. The practice became progressively more common from the XVIIIth Dyn. onwards and is reflected in the importance which attached to the temple barber during the N.K. (Erman, *Die Religion*, p. 200; Blackman, *HERE* X, 481; Bonnet, *RÄRG* p. 389). During the Graeco-Roman period wearing hair was, for a priest, a punishable offence (*BGU* I, p. 27, no. 16 (159/60 A.D.); *BGU* V (Gnomon), §§ 71-97 (c. 150 A.D.); Otto, *Priester und Tempel*, I, p. 63; II, p. 78).

τοῖσι ἄλλοισι ἀνϑρώποισι νόμος ἅμα κήδεϊ κεκάρϑαι ... καὶ τῷ γενείῳ : Much confirmation :

1. Representations of people mourning, both royal and non-royal, show a beard and moustache arising obviously from neglect (Desroches-Noblecourt, *BIFAO* 45 (1947), p. 185 ff.).

2. Lexicography. Words of mourning such as *ỉꜣkb* (*Wb* I, p. 34, 9) and *gꜣsw* (op. cit., V, p. 156, 1) are determined with the hair sign. In the light of the evidence mentioned above it becomes likely that this writing not only refers to the practice of sprinkling the hair with dust but also to the treatment of hair and beard.

3. References in the Dream Book (*Chester Beatty*, III, 8, 17; 9, 19) suggest that *ʿꜣw n šnw*, "lots of hair", is a sign of mourning.

4. The custom has been observed in some parts of Egypt in modern times (Blackman, *The Fellāḥīn of Upper Egypt*, p. 58).

5. D.S., I, 18, 3, if trustworthy, confirms H.

A similar custom was observed by the Jews (Desroches-Noblecourt, op. cit., p. 230) as also by the Ptolemies (Liv., XLIV, 19) and the Romans (Liv., XXVII, 34, 5; Plu., *Cat Mi* 53; id., *Ant* 18; Suet., *Caes* 67; *Aug* 23). It was even customary in some parts of Greece not to shave after a death in the family (Picard, *La Vie Privée dans la Grèce Classique*, p. 42), a practice observed also in modern times (Koukoulès, "*Βυζαντινῶν νεκρικὰ ἔθιμα*", *Ἐπετηρὶς τῆς Ἑταιρείας τῶν Βυζαντινῶν Σπουδῶν* 16 (1940), p. 70 ff.) but generally speaking the sign of mourning in Greece was shorn hair (*Od* IV, 198; E., *Tr* 1182 ff.; Aeschin., III, 211; Lys., II, 60 etc.).

Bibliography : Desroches-Noblecourt, *BIFAO* 45 (1947), p. 185 ff. contains an exhaustive discussion of this problem.

τέως ἐξυρημένοι : From the O.K. onwards it was the practice to shave off all facial hair and beards are very rare after that time (Kees, *Ägypten*, p. 90, n. 8) with the exception of swamp-dwellers (usually bird-catchers and fishermen) (Davies, *Puyemrê*, I, pl. XVII-XIX; Kees, op. cit., p. 19) and some artisans and servants (Davies, *Paintings from the Tomb of Rekh-mi-Rē*, pl. XVII). Indeed even in the L.P. cultivators are represented wearing beards (Lefebvre, *Petosiris*, III, pl. XIV). False beards for ceremonial purposes are, however, common (Kees, op. cit., p. 90, n. 8; Elliot Smith, *The Ancient Egyptians*, p. 124). Moustaches are more frequent and are found at all periods (Desroches-Noblecourt, op. cit., p. 187). Most Egs. wore their hair very short (Blackman, *RTM* II, pl. XVIII, 16; III, pls. XXIII, XXVI; Newberry-Griffith, *El-Bersheh*, I, pl. XIII; Virey, *Le Tombeau de Rekhmara*, pl. XLII) but clean-shaven heads were not popular as emerges from the medical papyri which contain a number of recipes for making hair grow. Wigs were very common indeed (Lucas-Harris, *AEMI*^{4} p. 30 ff.).

In view of these customs it is not surprising that barbers were of considerable importance in Ancient Egypt (reps. Newberry, *Beni Hasan*, II, pl. IV & XIII; for an amusing Hell. description of a barber shop vide *PZenCol* IV, no. 5965).

Bibliography : Kees, *Ägypten*, p. 89 ff.; Erman-Grapow, *Ägypten*, p. 245 ff.; Montet, *Everyday Life*, p. 69 ff.; Desroches-Noblecourt, *BIFAO* 45 (1947), p. 185 ff. These works together give an excellent summary of the subject with copious references.

ἀπὸ πυρῶν καὶ κριθέων ὦλλοι ζώουσι : *κρίθος* "barley" (*hordeum vulgare*) and *πυρός* "naked wheat" (*triticum vulgare*) were the commonest cereals cultivated amongst the Gks. (Blümner, *Technologie*^{2}, I, p. 51 ff.; Krenkel, *Artemis Lexikon*, 506; Sparkes, *JHS* 82 (1962), p. 123; Moritz, *Grain-Mills and Flour*, p. XX ff.; Jasny, *The Wheats of Classical Antiquity*, p. 14 ff.). Nevertheless, other cereals were grown in Greece. Hulled wheat/emmer (*ζειά* or *ὄλυρα*) was cultivated though its distribution was unequal. In S.E. Greece, including Attica, it was probably rare but N.W. of Attica it assumed ever greater importance and we know that it played a considerable rôle in Thessalian agriculture. D. (VIII, 45) mentions it along with millet in Thrace. Barley and wheat were treated in different ways in Greece. Barley was normally eaten in the form of a "kneaded thing" (*μᾶζα*). Bread could be made of it but it was considered, even in the 6th Century, as "fodder for slaves" (Ath., VII, 304b). *Πυρός* was eaten in the form of bread (vide Moritz, l.c.; Blümner, l.c.). In Palestine barley and naked wheat were the major cereal crops as in Greece (Jasny, op. cit., p. 148 ff.).

Αἰγυπτίων δὲ τῷ ποιευμένῳ ... ὄνειδος μέγιστόν ἐστι : Food was to the Egs. one of the important ways of distinguishing between different peoples. The texts prove that they were perfectly capable of showing contempt in the case mentioned by H., though they do not substantiate the precise details (Sauneron, *Kush* 7 (1959), p. 63 ff.).

ἀλλὰ ἀπὸ ὀλυρέων ποιεῦνται σιτία, τὰς ζειὰς μετεξέτεροι καλέουσι : *ὄλυρα* and *ζειά* = "hulled wheat, emmer"—in technical language *ὄλυρα* is probably "soft emmer", *ζειά* "hard emmer" (Jasny, op. cit., p. 129), but such subtle distinctions would not have worried many and we can assume that to most people, as to H., the two terms were interchangeable; Eg. *bdt* (*Wb* I, pp. 486, 14-18, 487, 1-7) which Griffith (*Cat. Dem.Pap.Ryl.*, III, p. 78, n. 11) shows to have been the chief crop between the XXII and XXVIth Dyn. P. Wilbour proves that the swing from *it* "barley" had already taken place in the XXth Dyn. (Kees, *Ancient Egypt*, p. 74). *Swt*, *πυρός* "naked wheat", does not assume the chief rôle until the Gk. Period (in detail Ruffer, *MIE* 1 (1919), p. 52 ff.; Täckholm-Drar, *Flora*, I, p. 239 ff.). Emmer nearly disappeared in Egypt after the beginning of the Christian era (Schnebel, *Die Landwirtschaft im hellenistischen Ägypten*, p. 94 ff.).

φυρῶσι τὸ μὲν σταῖς τοῖσι ποσί : Dough was used for two purposes in Egypt, bread-making and brewing (Lucas-Harris, *AEMI*^{4} p. 13). In both cases it could be kneaded with the feet (cf. Erman-Ranke, *Ägypten*, p. 224, fig. 71; Breasted, *Egyptian Servant Statues*, p. 32 with pl. 31; Garstang, *Burial Customs*, fig. 62), though this method seems to have been particularly characteristic of brewing (Gardiner, *Egyptian Grammar*^{3}, Sign List, A37).

There were variations, however :

1. Breasted, op. cit., p. 27, with pl. 27—man kneading dough in a bakery with the hands.
2. Steindorff, *Das Grab des Ti*, pl. 83-6. O.K.—women kneading dough with their hands. Cf. also Davies, *Tomb of Antefoḳer*, pl. XII; Breasted, op. cit., p. 31 with pl. 30b.
3. Davies, *Rekh-mi-rēʿ*, II, pl. L. N.K. Dough is being kneaded in a trough by means of poles.
4. id., *Tomb of Antefoḳer*, pl. VIII bottom register. Both hand and feet methods of kneading are illustrated.

In this case, therefore, we have yet another example of over-schematization. H.'s surprise arises from the fact that in Greece kneading bread was normally carried out in a *μάκτρα*, *μαγίς*, *σκάφη* or *κάρδοπος* by hand (Ath., XII, 548c; Blümner, op. cit., fig. 25; Amyx, *AJA* 49 (1945), p. 509, fig. 1). In Rome also kneading was done with the hands, though mechanical devices were known (Brandt, *Schaffende Arbeit und bildende Kunst*, fig. 151).

Bibliography : Blümner, *Technologie*², I, p. 1 ff., particularly p. 26 ff.; Krenkel, *Artemis Lexikon*, 505 ff.; Ruffer, *MIE* 1 (1919), p. 45 ff.

τὸν δὲ πηλὸν τῇσι χερσί : Since *πηλός* refers both to mud and clay (*LSJ* p. 1401, a, s.v. I, 1-2), one must consider Eg. and Gk. practices in brickmaking and in the manufacture of pottery.
Brickmaking. Breasted, *Egyptian Servant Statues*, p. 52 with pl. 46 c; Garstang, *Burial Customs*, fig. 129. M.K. Mud is being kneaded with the hands. As above, however, it is clear that there was more than one method. An XVIIIth Dyn. picture (Davies, *Rekh-mi-rē*ʿ, p. 54 ff. with pls. LVIII-LIX) shows the mud being kneaded with the feet. This method, still used today, involves mixing the mud with a hoe, supplemented by the feet (Clarke-Engelbach, *Ancient Egyptian Masonry*, p. 208; Klebs, *NR* I, p. 162). Reisner (*Mycerinus*, p. 72 ff.) points out that the methods probably varied from craftsman to craftsman and area to area, a suggestion supported by a representation at Beni Hasan which appears to show both methods being used on one and the same site (Scott ap Singer-Holmyard-Hall, *History of Technology*, I, p. 388).

Bibliography : Excellent discussion Lucas-Harris, *AEMI*⁴ p. 49 ff.

Pottery Production. Clay for pottery manufacture in all the representations seen by the present writer is kneaded with the feet (Newberry, *Beni Hasan*, I, pl. XI, 4th register; id., ib., II, pl. VII on the basis of which Klebs, *MR* p. 116 claims that H. was mistaken for the earlier period at any rate; Wreszinski, *Atlas* I, p. 301 ~ Klebs, *NR* I, p. 158 ff.). This is also the method employed today.

Bibliography : An excellent discussion of this and other aspects of ceramic production Lucas-Harris, op. cit., p. 368 ff.

In Greece mud for bricks and clay for pottery were kneaded with the feet :

Brickmaking. Krenkel, *Artemis Lexikon*, 3336 ff.
Pottery Production. Richter-Hall, *Red-figured Athenian Vases in the*

Metropolitan Museum of Art, p. XXXV ff.; Beazley, *PBA* 30 (1944), p. 87 ff.

καὶ τὴν κόπρον ἀναιρέονται : It is not in the picking up that the contrast with Gk. custom lies, since the Gks. also picked up *κόπρος* (X., *Mem* III, 8, 6), but that the Egs. used their hands whereas the Gks. employed some sort of instrument. It was used for different purposes in the two areas. The Gks. collected it and then put it back on the land as manure (*Od* XVII, 296 ff.; X., *Oec* XVII, 10; XVIII, 2; XX, 4; Thphr., *HP* II, 7, 4; VII, 5, 1; VIII, 7, 7; id., *CP* III, 9, 2; 20, 2; *GP* II, 21, 1; Michell, *Economics*, p. 53 ff.; Heichelheim, *An Ancient Economic History*, II, p. 113). The Egs., on the other hand, did not use manure (Kees, *Ägypten*, p. 36), though pigeon dung is so used in modern Egypt (Baedeker, *Egypt*^{7}, p. 235). There can be little doubt that it was employed, in fact, as fuel although there is no Ancient Eg. evidence, either pictorial or linguistic :

1. Egypt has relatively little good firewood (Forbes, *Studies*, VI, p. 18) and in such areas dung tends to function as a substitute (Singer, op. cit., I, p. 229).
2. Other types of farm waste, e.g. chaff and straw, are known to have been used as fuel in Ancient Egypt (Klebs, *AR* p. 90; Str., III, 2, 8 (C146)).
3. Dung is used as fuel today in Egypt (Forbes, op. cit., p. 14; Wiedemann, *Das alte Ägypten*, p. 188, § 141; Lane, *MCME* p. 199; Baedeker, l.c.).

τὰ αἰδοῖα ὦλλοι μὲν ἐῶσι ὡς ... Αἰγύπτιοι δὲ περιτάμνονται : Cf. II, 37, 2; 104, 2 ff.. Circumcision was certainly practised in Ancient Egypt. The evidence is of four kinds

1. Documents.
2. Representations.
3. Statues.
4. Mummies.

The interpretation of this material is difficult. All the bodies in one

Predynastic cemetery were circumcised (Reisner, *Naga-ed-Dêr*, I, p. 112; Smith, *Report of the Archaeological Survey of Nubia* (*1907-8*). II. *Human Remains*, p. 20). On the basis of human remains Elliot Smith and Dawson (*Egyptian Mummies*, p. 93) and Jonckheere (*Centaurus* 1(3) (1951), p.222) can speak of the practice as regular above the age of puberty, a view which finds considerable support in classical writers (D.S., III, 32; Str., XVII, 2, 5 (C824); Ph., *Spec Leg* I, i-ii; id., *Quaestiones in Genesim* III, 47). On the other hand, it is clear that during the O.K. and M.K. circumcision was not a universal practice (cf. Lutz, *Egyptian Statues and Statuettes*, pl. 39-40 with p. 27; Boeser, *Beschreibung der äg. Sammlung Leiden*, II, pl. 30) and it is generally believed (e.g. Sigerist, *History of Medicine*, I, p. 243 ff.), though proof positive is not available, that this holds true for the whole of the Pharaonic period, the operation only being compulsory for priests and royalty (Foucart, *HERE* III, p. 674 ff.; Ghalioungui, *Magic and Medical Science*, p. 96). It was certainly obligatory for priests in the Roman Period (Otto, *Priester und Tempel*, I, p. 214 ff.; II, pp. 279, 326) and was so deeply entrenched that they alone were exempted from the general prohibition of Hadrian against the practice (Bonnet, *RÄRG* p. 109).

The age at which the rite could be carried out varied from 1 year to puberty though c. 6-12 was the standard (Smith-Dawson, op. cit., p. 93; Pillet, *ASAE* 52 (1954), p. 93 ff.; Foucart, op. cit., p. 672; Ghalioungui, op. cit., p. 150; Jonckheere, op. cit., p. 222 ff.; Sigerist, l.c.; Grapow, *Grundriß*, III, p. 16, n. (b)). The evidence suggests that the operation was carried out by a priest using a flint knife (Watermann, *Bilder aus dem Lande des Ptaḥ und Imḥotep*, p. 83) and Capart (*Mélanges Loret*, *BIFAO* 30 (1930), p. 73 ff.) has pointed out indications that it was accompanied by feasts of circumcision.

On the character of the operation there are two opinions :

1. The foreskin was slit but not removed (Jonckheere, op. cit., p. 224 ff.; Pillet, op. cit., p. 96 ff.).
2. The foreskin was possibly completely removed as amongst the Hebrews (Lefebvre, *La Médecine*, p. 175, n. 2).

In fact, the evidence, though not completely clear, suggests that both methods may have been employed.

ὅσοι ἀπὸ τούτων ἔμαθον : II, 104, 2-4 lists these as Colchians, Phoenicians, Palestinian Syrians, Syrians living in N.E. Asia Minor and Macrones. The idea expressed here that the Egs. gave the practice to everyone else is modified in II, 104, 4 where H. admits the possibility that the Ethiopians gave it to Egypt. Eg. contacts known to have observed this custom are the Aḳawasha (Introduction, p. 7, n. 26) and some Libyan tribes (Hölscher, *Libyer und Ägypter*, p. 44 ff.). The statement illustrates two traits of H.'s mind :

1. Similarity in customs suggests that the earliest practitioner should be regarded as the teacher of the others. He does not realize that similar stimuli can give rise to similar responses (Introduction, p. 147 ff.).

2. H., as usual, regards as normal what is done in Greece and its immediate environs. In fact, the custom is exemplified as a ritual act all over the world with the exception of Europe and non-Semitic Asia (Foucart, op. cit., p. 659 ff.).

Bibliography : Chabas, *ṚA* N.S. 3 (1861), p. 298 ff.; Reitzenstein, *Zwei Religionsgeschichtliche Fragen*, I; Wilcken, *APF* 2 (1902), p. 4 ff.; Wendland, *APF* 2 (1902), p. 22 ff.; Wiedemann, *OLZ* 6 (1903), p. 97; Otto, *Priester und Tempel*, I, p. 214 ff.; II, pp. 279, 326; Naville, *Sphinx* 13 (1910), p. 227 ff.; Gray et al., *HERE* III, p. 659 ff.; Elliot Smith-Dawson, *Egyptian Mummies*, pp. 75, 93; Dawson, *Magician and Leech*, p. 9; Jonckheere, *Centaurus* 1(3) (1951), p. 212 ff.; Sigerist, *History of Medicine*, I, p. 243 ff.; Pillet, *ASAE* 52 (1954), p. 93 ff.; Lefebvre, *Médecine Égyptienne*, p. 173 ff.; Bonnet, *RÄRG* p. 109ff.; Watermann, *Bilder aus dem Lande des Ptaḥ und Imḥotep*, p. 82 ff.; Ghalioungui, *Magic and Medical Science*, p. 95 ff.; Grapow, *Grundriß*, I, p. 86; III, p. 16, n. (b).; de Wit, *ZÄS* 99 (1973), p. 41 ff.

εἵματα τῶν μὲν ἀνδρῶν ἕκαστος ἔχει δύο : In II, 81, 1 we are told that the two garments consisted of a linen tunic and a woollen mantle. Direct evidence on the subject of Eg. clothing in the 5th Century is not known to the present writer but general considerations suggest that H. is correct :

1. The remark does reflect a basic characteristic of Eg. dress viz. that men were more elaborately dressed than women (Erman-Ranke, *Ägypten*, p. 231 ff.; Speleers, *Le Costume Oriental Ancien*, p. 61 ff.).

2. A statement on such a simple matter, involving direct observation with virtually no need of interpretation, is not likely to be untrue.

τῶν δὲ γυναικῶν ἓν ἑκάστη : From the time of the Pyramid Builders to the XVIIIth Dyn., amongst the upper classes at any rate, this was supplemented by an over-garment. Servants, however, are shown still wearing the simple dress then out of fashion in higher circles (*LD* III, pl. 42, 91h; Wilkinson, *Manners and Customs*, I, p. 392). It was probably a descendant of this which was worn by the majority of Eg. women in H.'s time, though they would certainly need additional clothing in the winter season.

Bibliography : Heuzey, *Histoire du Costume dans l'Antiquité Classique*, p. 11 ff.; Erman-Ranke, *Ägypten*, p. 231 ff.; Houston, *Ancient Egyptian, Mesopotamian and Persian Costume*, p. 1 ff.; Bonnet, *Die ägyptische Tracht*; Sigerist, *History of Medicine*, I, p. 245; Montet, *Everyday Life in Egypt*, p. 72 ff.; Speleers, *Le Costume Oriental Ancien*, p. 61 ff.

τῶν ἱστίων τοὺς κρίκους καὶ τοὺς κάλους οἱ μὲν ἄλλοι ἔξωθεν ... Αἰγύπτιοι δὲ ἔσωθεν : *κρίκος* "ring" (Powell, *Lexicon*, p. 200, b). The use of *προσδέω* shows that they are attached to the sail. Therefore, *LSJ* (p. 995, b, s.v. *κρίκος* 2) are wrong when they translate "eyelet-hole". The term *κάλοι* is usually rendered "brailing-ropes" (Torr, *Ancient Ships*, p. 81, n. 178; Morrison-Williams, *Greek Oared Ships*, p. 299 ff.) but since they were also used for increasing or decreasing the sail-area (Pl., *Prt* p. 338a; Ar., *Eq* 756; E., *Med* 278; *Tr* 94), i.e. for "reefing" the sail, "reefing-ropes" would be an equally suitable translation (cf. *OED* under "reefing" and "brailing").

It was Gk. practice to fix rings to the leading-edge of a sail to keep in position the reefing ropes which ran from the poop *via* the yard down the front of the sail and the *κάλοι* are often depicted in this position (cf. Morrison-Williams, op. cit., pl. 20d). *Κρίκοι*, on the other hand, have never been identified on Gk. representations but Roman sources give us striking illustrations of what their position and appearance must have been in H.'s time (Torr, op. cit., pl. 6, fig. 29; Gullini, *I Mosaici di Palestrina*, pl. I; Casson, *Ships and Seamanship*, pl. 154).

Αἰγύπτιοι δὲ ἔσωθεν : Proof positive that in H.'s time the Egs. were using a loose-footed sail (vide n. II, 96, 3). Ships rigged with *κάλοι* and *κρίκοι* on the windward side of the sail are represented several times in the Ptol. temple of Edfu (Chassinat, *Edfou*, XIII, pl. CCCCLXX, CCCCLXXI, DVIII, DXXX). None occurs earlier but Landström suggests (*Ships of the Pharaohs*, p. 111), probably rightly, that the XXth Dyn. Eg. ships represented at Medinet Habu were rigged in exactly this way. The practice was probably of foreign origin since it is certainly totally at variance with earlier custom (Landström, op. cit., passim).

γράμματα γράφουσι καὶ λογίζονται ψήφοισι Ἕλληνες μὲν ... ἐπὶ τὰ δεξιὰ ... Αἰγύπτιοι δὲ ... ἐπὶ τὰ ἀριστερά : Hieratic and Demotic are always written from right to left. Though Hieroglyphic usually runs from right to left, it is occasionally written in the opposite direction (Gardiner, *Egyptian Grammar*^{3}, p. 25). In H.'s time Gk. was written from left to right, though early inscriptions are written in the reverse direction as well as in the boustrophedon system (Jeffery, *Archaic Scripts*, p. 43 ff.; Woodhead, *The Study of Greek Inscriptions*, p. 24 ff.).

λογίζονται ψήφοισι : This phrase has caused difficulty :

I. Spiegelberg (*Hermes* 56 (1921), p. 435 ff.) translated "calculate with counters". This does not give a good sense because it would not form an adequate counterpart of *γράμματα γράφουσι.*

II. Powell (*Lexicon*, p. 385, a, s.v. *ψῆφος*) suggests that the word means "abacus-bead". This fails because there is no evidence that the Ancient Egs. ever used the abacus (Vogel, *Vorgriechische Mathematik*, I, p. 31, 2).

III. Gwyn Griffiths points out (*ASAE* 53 (1956), p. 142) that *ψῆφος* is known in the sense "cipher" or "number" (*LSJ* p. 2023, a, s.v. *ψῆφος* II, 1) and suggests, surely correctly, that H. is referring to calculations made and recorded in writing. This then gives the required counterpart to *γράμματα γράφουσι*; for in Eg. calculations the direction of the signs was determined by that of the adjacent writing. The same was obviously true of the Gks. and they must, therefore, have made their calculations from left to right.

καὶ ποιεῦντες ταῦτα αὐτοὶ ... ἐπιδέξια ποέειν ... Ἕλληνας δὲ ἐπαρίστερα : This again has caused difficulty. Various suggestions have been offered :

I. *ἐπιδέξια* and *ἐπαρίστερα* refer to the direction in which the hand moved when the signs were being formed i.e. H. means that while the Egs. wrote from right to left they formed the signs from left to right (Brugsch. *Gramm. Dém.*, p. 15, § 27; Wiedemann, *Kommentar*, p. 162; Stein, *Herodotos*, II, p. 44; How-Wells, *Commentary* I, p. 182).

The observation on Eg. writing methods is, in fact, true (Brugsch, op. cit., p. 15 ff.; Möller, *Hieratische Paläographie*, I, p. 7) but the suggestion is unacceptable for several reasons :

(a) The required contrast between Gk. and Eg. methods of forming characters would not exist; for both Gks. and Egs. formed their letters from left to right (Spiegelberg, op. cit., p. 436).

(b) The translation assumes that *ἐπιδέξια* and *ἐπαρίστερα* are identical in meaning with *ἐπὶ τὰ δεξία* and *ἐπὶ τὰ ἀριστερά* and takes no cognizance of the absence of the article in the first case (Spiegelberg, op. cit., p. 436).

II. *ἐπιδέξια* and *ἐπαρίστερα* mean "rightly" and "wrongly" (Spiegelberg, l.c.; accepted Lawrence, *Herodotus*, p. 162). Evidence :

(a) There are convincing lexicographical examples to justify the translations.

(b) If correct, the sentence offers a pun and the idea expressed is the naive conviction that one's own customs alone are valid and those of everyone else wrong. In view of H.'s interest in the relative nature of moral standards (III, 38 most explicit) Spiegelberg appears on the mark when he suggests that H. is making an ironic jest at this idea.

III. H. might be referring to the fact that although Eg. scripts ran from right to left the signs looked to the right and that the opposite was true of the Gks. (Gwyn Griffiths, op. cit., p. 142 ff.). There are objections :

(a) The contrast with Gk. is lost because Gk. letters look to the right. This is admitted by Gwyn Griffiths himself but he tries to get round it by arguing that, once the observation about the contrast in Eg. writing had been made, the phrase *Ἕλληνας δὲ ἐπαρίστερα* was added simply to complete the contrast. He points out that elsewhere in 35-6 contrasts are forced. Surely, however, nowhere in this section does H. fabricate a contrast by making a statement about Gk. culture which he *must* have known was complete nonsense!

(b) The suggestion suffers from the objection in I(b).

The most cursory survey will show that the case for II is infinitely the strongest and we, therefore, conclude that Spiegelberg's interpretation is correct.

διφασίοισι δὲ γράμμασι χρέωνται καὶ τὰ μὲν αὐτῶν ἱρά, τὰ δὲ δημοτικὰ καλέεται : H. mentions here only two forms of writing :

1. *τὰ ἱρὰ γράμματα* "Hieroglyphic". At first sight one is tempted to regard it as Hieratic but the translation "Hieroglyphic" is beyond doubt in II, 106, 4 and must be accepted here.

2. *τὰ δημοτικὰ γράμματα* "Demotic", called sometimes in older books "Enchorial".

H. omits the third Eg. script, Hieratic, which forms the evolutionary link between Hieroglyphic and Demotic. This is a little odd :

(1) Even in Demotic texts a little earlier than H. we find Hieratic sentences (cf. Griffith *Cat.Dem.Pap.Ryl.*, III, p. 5).
(2) Clem. Al. knew of its existence (*Strom* V, 4, 20).

Spiegelberg, however, points out (op. cit., p. 434 ff.) that it was employed in H.'s times almost exclusively for religious texts and thus would not have come to his notice.

S. (op. cit., p. 435) believed that the information came from a *ἑρμηνεύς* because a learnèd priest would have used names different from those which we must assume to lie at the back of H.'s *τὰ ἱρὰ γράμματα* and *τὰ δημοτικὰ γράμματα* :

1. Hieroglyphs were called in Eg. *mdw nṯr* "Words of God" or *mdw n pr-ʿnḫ* "Words of the House of Life".

2. Demotic was called *sẖ šʿt* "Letter Script", a term, in fact, rendered by Clem. Al. (l.c.) as *τὴν Αἰγυπτίων γραμμάτων μέθοδον ... τὴν ἐπιστολογραφικὴν καλουμένην*.

This is true of 2 but to the present writer *τὰ ἱρὰ γράμματα* seems quite a close approximation to the Eg. *mdw nṯr*. The entire hypothesis should be treated with reserve.

S. also remarks that H. knows nothing of Aramaic, the official language of the Persian administration and that this omission shows that he did not enter into particularly close relations with Persian officials. The argument is not convincing; for H. is talking about *Eg.* systems of writing not those used by the *Persians*.

Bibliography : Sethe, *Vom Bilde zum Buchstaben*; Schott, *Hieroglyphen*; Gardiner, *Egyptian Grammar*^{3}, p. 9 ff.; Möller, *Hieratische Paläographie*; Spiegelberg, *Demotische Grammatik*; Lexa, *Grammaire Démotique*; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 325 ff.

37. **ϑεοσεβέες δὲ περισσῶς ἐόντες μάλιστα πάντων ἀνϑρώπων :** Cf. Cic., *Tusc* V, 27; Ael., *VH* II, 31; Cels. ap Origenes, *Cels* III, 37; Tac., *Hist* I, 11; D.S., I, 83. In fact, the *θεοσέβεια* appears at two levels in the L.P. :

1. Profound personal devotion to god (Otto, *Die biographischen Inschriften*, p. 20 ff.).
2. Increase in magical practice attendant upon the upsurge of popular religion characteristic of the time (Bonnet, *RÄRG* p. 438).

In general see Wiedemann, *Das alte Ägypten*, p. 354 ff.; Erman, *Die Religion*, p. 295 ff.; Bonnet, op. cit., p. 196 ff.; Morenz, *Ägyptische Religion*, p. 85 ff.; Roeder, *Volksglaube im Pharaonenreich*, p. 171 ff.

ἐκ χαλκέων ποτηρίων πίνουσι, διασμῶντες ... πάντες : In all periods cups of a variety of materials were used—pottery (Budge, *B.M. Guide 3rd & 4th Rooms* (1904), p. 252 ff.), faience (Hayes, *The Scepter of Egypt*, II, pp. 150, 205 etc.), stone (v. Bissing, *CGC. Steingefäße*; Hayes, op. cit., II, pp. 139, 207, 293 etc.), glass (Hayes, op. cit., II, pp. 139, 194, 254, 277), gold (Möller, *Metallkunst*, pl. 35-6; Hayes, op. cit., II, p. 139), silver (Möller, op. cit., pl. 37; Hayes, op. cit., II, p. 139), copper (Roeder, *Äg. Bronzewerke*, pl. 39d with § 301; Emery, *ASAE* 39 (1939), p. 427 ff. ~ *GT* I, p. 20 ff.) and bronze (Hayes, op. cit., II, pp. 64 ff., 205 ff., 314). By H.'s time a strong bias to copper/bronze is confirmed :

1. Hellanic. (*FgrH* 4, F.53), on clearly independent authority, speaks of the general use of copper/bronze utensils in Eg. houses.
2. Archaeological evidence suggests that by the Ramesside Period bronze drinking vessels were commonplace even amongst the less wealthy (Hayes, op. cit., II, p. 406).

Expense, however, would prevent the universal use suggested by H. In fact, since there is clear evidence that bronze was considered in the L.P. to have sanctifying powers (Bonnet, op. cit., p. 636), H. is probably generalizing from a statement on the measures taken by the more pious Egs. to attain purity. Bronze cups were widely, though not exclusively, used in Egypt during the 19th Century (Lane, *MCME* p. 152).

εἵματα δὲ λίνεα ... τοῦτο μάλιστα : See on II, 81. Cleanliness in body and dress was essential to ritual purity and would consequently be a prerequisite of *θεοσέβεια* (Watermann, *Bilder aus dem Lande des Ptaḥ und Imḥotep*, p. 31; Bonnet, *RÄRG*, pp. 631 ff., 633 ff.; Blackman, *HERE* X, p. 477).

τά τε αἰδοῖα περιτάμνονται ... καθαρειότητος εἵνεκεν : In general vide II, 36, 3. Hygiene is given as the reason by Ph. (*Spec Leg* I, i; cf. Bonnet, op. cit., p. 110 ff.). This is unacceptable as the basic cause (Foucart, *HERE* III, p. 675) and other explanations have been offered :

1. Health. Watermann (op. cit., p. 84) suggests that it was intended to forestall phimosis, a common complaint in Med. countries characterized by contraction of the foreskin. He states that the Egs. themselves regard it as medically useful in preventing inflammation and tumours. Ph. (l.c.) speaks of it as a means of avoiding a complaint called *ἄνθραξ*.
2. Fertility and preparation for marriage. Ph. (l.c.) claims that it was believed to increase fertility while Wendland (*APF* 2 (1902), p. 26 ff.) regarded it as the dedication of the member with a view to obtaining fertility.
3. Initiation. Throughout the world the rite is generally found associated with the ceremonies marking the attainment of an initiation into manhood (Fortes, ap Evans-Pritchard et al., *The Institutions of Primitive Society*, p. 92) and is to be regarded as an initiation ritual (Foucart, op. cit., p. 664 ff.). Foucart (op. cit., p. 670 ff.) argues from *BD* XVII, 60 ff. that circumcision was originally a rite of initiation and affiliation to the cult of Rēʿ (cf. also Ghalioungui, *Magic and Medical Science*, p. 95). He does, however, admit that the motivation in Pharaonic times was
4. Purity. This factor emerges clearly from :

(a) The insistence on circumcision for priests (Bonnet, op. cit., pp. 109 ff., 632).
(b) The *Abscheu* shown for the uncircumcised by Piankhi (*Urk* III, 54).

Our conclusion must, then, be that, whatever the ultimate reason for circumcision in Egypt may have been, H.'s *καθαρειότητος εἵνεκεν* is a perfect expression of Pharaonic attitudes on the matter.

οἱ δὲ ἱρέες ξυρῶνται πᾶν τὸ σῶμα διὰ τρίτης ἡμέρης : For the priestly obligation to shave the head vide n. II, 36, 1. In addition depilation was practised from an early period (Synesius, *Calvitii Encom.* 7; Ph., op. cit., I, i; D.L., VIII, 87; Capart, *Rue de Tombeaux*, pl. 66; Faulkner, *JEA* 22 (1936), p. 122). A parallel is the emphasis on purity of the hands (Sethe, *Lesestücke*, p. 71; Newberry, *El Bersheh*, II, pl. VII; Lange-Schäfer, *Grab- und Denksteine des MR*, II, pp. 148(7), 155(10); Gardiner-Weigall, *Top. Cat. Private Tombs at Thebes*, p. 43; Wreszinski, *Äg. Inschriften in Wien*, p. 22, cf. p. 132) including paring the nails (Moret, *Le Culte Divin Journalier*, p. 170; Capart, op. cit., pl. 67).

ἵνα μήτε φθεὶρ μήτε ἄλλο ... τοὺς θεούς : Otto (*Priester und Tempel*, II, p. 256, n. 3) considered that shaving the head was part of a *Haaropfer* symbolizing dedication to the god. H. is more likely to be right in view of the premium placed on purity in the cult (*Urk* I, 173 ff.; ib., IV, 831, 11; Brugsch, *Grosse Oase*, p. 55 with pl. 17; Roeder, *Bet-el-Wali*, p. 2; Alliot, *Le Culte*, I, pp. 141, 181 ff.; Erman-Ranke, *Ägypten*, p. 323; Bonnet, *RÄRG* p. 389 ff.).

ἐσθῆτα δὲ φορέουσι ... μούνην : Plin., *HN* XIX, 14; Plu., *DIO* 3-4 (*Mor* 352); Apuleius, *Met* II, 28; Claud., *IV Cons Hon* 573; Sil., III, 24. Woollen garments were forbidden in the Graeco-Roman Period (*BGU* I, no. 16; V, §§ 71, 75).

καὶ ὑποδήματα βύβλινα : Philostr., *VA* VIII, 7 (333) ~ Hopfner, *Fontes*, p. 447; Apuleius, *Met* II, 2 speaks of *palmeae baxeae*. As early as the IXth-Xth Dyn. priests had to wear white sandals during their period of service (Gardiner, *JEA* 1 (1914), p. 27; *BD* CXXV; Blackman, *HERE* X, p. 481). There is no Eg. evidence known to me which proves that they had to be of papyrus though papyrus sandals were certainly worn (Carter, *Tomb of Tutankhamun*, I, p. 167; Quibell, *CGC. Tomb of Yuaa and Thuiu*, pp. 58-9; Täckholm-Drar, *Flora*, II, p. 119; Wiedemann, *Das alte Ägypten*, p. 126; Lucas-Harris, *AEMI*^{4} p. 137).

λοῦνται δὲ δίς τε ... νυκτός : Chaeremon, himself a priest, states (ap Porph., *Abst* IV, 7) that before entering their period of office priests washed three times a day in cold water—at rising, before dinner, and before sleep. Bathing in water was a crucial part of the rites of purification preceding celebration of the cult and is often represented and described, usually in connection with the sacred lake (Mariette, *Dendérah*, I, pl. 10-12; Legrain, *ASAE* 4 (1903), p. 225; de Morgan, *Ombos*, I, p. 39, 165; Naville, *Deir el Bahari*, III, pl. LXIII; Blackman, *Derr*, pl. 43; *LD* III, pl. 124; *Urk* III, 37 ~ *BAR* IV, § 870; *PT* 519, 921, 1180-1; *BD* CLXII, 41 ff.; *Urk* III 8, 12; Moret, *Le Culte Divin Journalier*, pp. 8, n. 1; 79, n. 2; Alliot, *Le Culte*, I, p. 189 ff.).

Theologically the water served two functions :

1. It washed away dirt i.e. purified.
2. It gave new life and power.

Vide Blackman, *HERE* X, p. 476 ff.; Jéquier, *Frises d'Objets*, p. 113.

ἄλλας τε ϑρησκείας ἐπιτελέουσι μυρίας ὡς εἰπεῖν λόγῳ : Detailed account ap Chaeremon l.c. Cf. also Merkelbach ap Derchain (Ed.), *Religions en Égypte Hellénistique et Romaine*, p. 69 ff.

πάσχουσι δὲ ... οἶνος ἀμπέλινος : There is ample evidence to show that priests received food as part of their payment. They had basically two sources of revenue :

1. Temple Estates (Sethe, *Urk* I, 25; Griffith, *Cat.Dem.Pap.Ryl.*, III, p. 98 ff.; Wilcken, *Grundzüge*, p. 94 ff.). The stipend from these (Hell. *σύνταξις*, Otto, *Priester und Tempel*, II, Index s.v.) was paid annually (Griffith, op. cit., p. 65).
2. Offerings which were divided up every day amongst the priests according to rank (Borchardt, *ZÄS* 40 (1902), p. 114; Sethe, *Urk* I, 26, 37, 119, 6 ff.; 294, 8 ff.; Kees, *Ägypten*, p. 246)—the *πρόσοδοι* or *τροφή* of the Canopus Stone (*Urk* II, 152).

The priests' daily rations consisted of bread, beer and meat (Borchardt, op. cit., p. 114; cf. Petrie, *Koptos*, pl. VIII, 6 & 11, Griffith, *Cat.Dem.Pap. Ryl.*, III, 45 confirming H. in detail; *BGU* I, 1, 17-18; 149, 6-7). In the Hell. Period wives and daughters also received an allowance (*Urk* II, 152 ff.). In some cases at least the High Priests received special perquisites (Griffith, *Siût and Dêr Rîfeh*, pl. 7, 302 ff.). It was common for priests of a divine-temple to increase their income by performing periodic services for the dead (Griffith, l.c., pl. 6 ff.; Davies-Gardiner, *Amenemhēt*, p. 78 ff.; Peet, *LAAA* 7 (1914-16), p. 82 ff., pl. XV, l. 9 ff.). In Hell.

times the priests received temple houses (Otto, op. cit., I, p. 283; Str., XVII, 1, 29 (C806)).

Bibliography : Otto, *Priester und Tempel*, I, p. 258 ff.; Blackman, *HERE* X, p. 298; Kees, *Ägypten*, p. 246 ff.

σιτία ... ἱρὰ πεσσόμενα : An old text (Gardiner, *Admonitions*, p. 76) suggests that priests during their period of duty had to eat a special white bread.

ἰχθύων δὲ οὔ σφι ἔξεστι πάσασθαι : Chaeremon l.c.; Plu., *DIO* 7 (*Mor* 353); id., *Quaest Conviv* VIII, 8, 2 (*Mor* 729); Horap., *Hieroglyphica* I, 14, 44; Clem. Al., *Strom* VII, 6, 33, 8; Jul., *Or* V, 176b-177b. Some species were forbidden amongst the Jews (*Deut* 14, 9; *Leviticus* 11, 9, 12). On the fish in Eg. Religion see II, 72. This information confirms H. but there are strange lapses, e.g. an L.P. representation of fish being brought to the grave of a priest (*Mus. Ég.*, II, pl. 32 + p. 78).

κυάμους δὲ οὔτε τι μάλα σπείρουσι Αἰγύπτιοι ... πατέονται : Untrue. Seeds of *Faba vulgaris* Monch (*Vicia faba* L.), the ordinary broad bean, have been discovered in funerary offerings of the XIIth Dyn. (Schweinfurth, *BIE* 2(5) (1884), p. 7 ff.) and a seed of the Indian bean (*Cajanus indicus* L.) has also been found (Wönig, *Pflanzen im alten Ägypten*, p. 215). P. Harris I (Erichsen, 39, 13; 55b, 7) mentions as offerings to the Nile god 11, 998 jars of beans and 2, 396 jars of shelled beans. What is more, in the Hell. period D.S. (I, 89, 4) bears clear witness to its cultivation in Egypt. In fact it was used both as a food and for medical purposes (*Wb* I, p. 56, 14-5; as food vide Hartmann, *L'Agriculture dans l'Ancienne Égypte*, p. 54; Forbes, *Studies*, III, p. 53; as medicine vide Grapow, *Wörterbuch der ägyptischen Drogennamen*, p. 17, s.v. *ỉwryt*; id., *Wörterbuch der med. Texte*, I, p. 33, s.v. *ỉwryt*).

οἱ δὲ δὴ ἱρέες οὐδὲ ὁρέοντες ἀνέχονται ... μιν ὄσπριον : So Aristag. Hist. (*FgrH* 608, F.7); Plu. *DIO* 5 (*Mor* 352); *Quaest Conviv* VIII, 8, 2 (*Mor* 729); cf. D.S. I, 89, 4. Eg. evidence is sparse and amounts to no more than the following :

1. The old name of the capital of the 16th Nome of U.E.—*'Irw*

"Bean Town"—was early supplanted by *Ḥbnw* (Daressy, *RT* 23 (1901) p. 125 ff.). Such a change might well reflect the religious abhorrence described by H.

2. Beans are rarely mentioned in the texts (l.c.), possibly for the same reason.

3. Late evidence suggests that the Egs. avoided beans because they caused flatulence. There is a widespread belief that demons can be taken into the body with food, an idea obviously particularly powerful where the food can cause digestive difficulties. Since beans are particularly troublesome from this point of view, they were considered unusually efficient demon-carriers and obviously to be avoided by purity-conscious priests (Jacoby, *RT* 34 (1912), p. 9).

The bean-taboo is, in fact, widespread. Beans were unacceptable to Demeter at Pheneus in Arcadia (Paus., VIII, 15, 3); the priests of the Eleusinian Mysteries were forbidden them (D.L., VIII, 33; cf. Paus., I, 37, 4); *dicta* of the *φυσικοί* warn against them (*Gp* II, 35, 8); Pythagoras and the Orphics forbade them (Plu., *Sym* II, 3, 1 (*Mor* 635); Gregory Nazianzus, *Theol Or* I, 10) and at Rome the Flamen Dialis was not permitted even to utter the word "bean" (Fab. Pict. ap Gell., X, 15, 12; Varr. ap Plin., *HN* XVIII, 119). In most cases the flatulence which they often cause will be the reason. Vide in general Olck, *RE* III, 1, 609 ff.; Gams, *KP* I, p. 918; Wiesner, *Artemis Lexikon*, 484 ff.

ἱρᾶται δὲ οὐκ εἷς ἑκάστου τῶν ϑεῶν ἀλλὰ πολλοί ... ἀρχιέρεως : In Greece there would have been only one priest at a time (D.S., I, 73, 5) whereas even small provincial temples in Ancient Egypt would have had several and an important shrine a very large number, organized according to the following scheme :

Higher Clergy

Prophets : (*ḥmw nṯr*). The First Prophet (*ḥm nṯr tpy*) was the High Priest. There were, in addition, Second, Third and Fourth Prophets. They performed the major rites of the temple and only they could enter the *sanctum* (*st wrt*) and contemplate the "Manifestations of the God" (*ḫprw nṯr*). There could be many other prophets who were divided, if sufficiently numerous, into four watches (*s3w*; Gk. *φυλαί*). The Higher Clergy also included a mysterious group of *ỉt*(*w*) *nṯr* "God's Fathers".

Lower Clergy

Wēbs : (*wʿbw*). These functioned as the assistants of the prophets in the divine offices and in all other activities. They too were divided, where possible, into four watches. Lectors : (*ẖryw-ḥb*(*t*)). These priests were responsible for the rolls containing the liturgy etc. and were essential participants in most rituals. They were divided into watches.

Apart from these priests there was a wide variety of lay officials e.g. the *ỉmyw st-ʿ*.

Bibliography : As for II, 36, 1.

ἐπεὰν δέ τις ἀποθάνῃ, τούτου ὁ παῖς ἀντικατίσταται : Cf. II, 143, 3; D.S., I, 88, 2, cf. I, 73, 5; Eus., *PE* II, 1, 40; Hld., *Aeth* I, 19. Throughout most of Eg. history two factors operate in priestly appointments :

1. The king's right of appointment. He was technically the priest of all the gods of Egypt. The officiant acted as his deputy and it was for him to appoint that deputy (Kees, *Das Priestertum*, p. 1; id., *Ägypten*, p. 242; Bonnet, *RÄRG* p. 597).
2. Heredity. As with provincial governorships the natural tendency to appoint the son led to a strong feeling of hereditary right. The lucrative nature of the priesthoods and the need to ensure mortuary service by hereditary property strengthened this (Kees, *Das Priestertum*, p. 2; Bonnet, op. cit., p. 599).

Examples of these two factors at work are :

1. King. N.K. Sethe, *ZÄS* 44 (1907), p. 30 ff.; Kees, *Lesebuch*, 9, 43; *BAR* III, § 565.
Saite. Griffith, *Cat.Dem.Pap.Ryl.*, III, p. 83, 8, 15 ff.
Persian. Erman, *ZÄS* 31 (1893), p. 92; Lefebvre, *Petosiris*, II, Ins. 90; Spiegelberg, *SPAW* 1928, p. 606.
Ptol. Brugsch, *Thes.*, V, p. VIII, 942; Strack, *Dynastie der Ptolemäer*, Insch. 95; Otto, *Priester und Tempel*, I, p. 224.

2. Heredity. O.K. Sethe in Borchardt, *Grabdenkmal des Königs Śaꜣḥureʿ*, II, p. 122.
M.K. Griffith, *Siût and Dêr Rîfeh*, pl. 7, l. 288.
N.K. Kees, *Ägypten*, p. 243; L*D* III, pl. 62b, 237e; Daressy, *RT* 35 (1913), p. 130; Erman, *ZÄS* 33 (1895), p. 18 ff.
Saite. Griffith. *Cat.Dem.Pap. Ryl.*, III, pp. 80 ff., 83 ff., 97. This principle is strongly emphasized in the office of High Priestess of Amūn who had to be the daughter, albeit adopted, of her predecessor (Sander-Hansen, *Das Gottesweib*, p. 15 ff.; Kees, *Das Priestertum*, p. 266 ff.).
Graeco-Roman. An *ἀπόδειξις τοῦ γένους* is generally essential (*PTeb* II, p. 59; *Urk* II, 135; Otto, op. cit., I, p. 217).

The balance between these factors was precarious and only maintained by the authorities' recognizing hereditary claims where possible. It is, however, only after the XXth Dyn. that *purely* priestly families occur (Legrain, *CGC. Statues et Statuettes*, I, 42138; II, 42188-9, 42211, 42215; id., *RT* 27 (1905), p. 73 ff.) and only in the Graeco-Roman Period that there is positive evidence of *insistence* on priestly birth.

The trend of these data makes it quite clear that H. is substantially correct.

Bibliography : Otto, *Priester und Tempel*, I, 203 ff.; Meyer, *SPAW* 1928, p. 495 ff.; Blackman, *HERE* X, p. 293 ff.; Kees, *Ägypten*, p. 242 ff.; id., *Das Priestertum*, p. 1 ff.; Bonnet, *RÄRG* p. 596 ff.

38. **τοῦ Ἐπάφου :** II, 153; III, 28: Eg. *Ḥpw*. On the identification cf. Ael., *NA* XI, 10; Linforth, *CPCPh* 2 (1910), p. 81 ff.; Hopfner, *Tierkult*, p. 76, n. ***; Bonnet, *RÄRG* p. 50; Kees, *Götterglaube*², p. 76. The sacred bull of Memphis, worshipped as early as the Ist Dyn. (Emery, *The Tomb of Hemaka*, p. 40 with pl. 19D) and important throughout Eg. history. In origin a creator god closely connected with fertility (*PT* 1313; Kees, *Re-Heiligtum*, III, p. 8; Otto, *Stierkulte*, p. 23 ff.), he was later intimately associated with Ptaḥ, often being called *Ḥpw bꜣ·k špssy nty r-gs·k* "Apis, thy (sc. Ptaḥ's) august soul which is beside thee" (Erichsen, *P. Harris I*, 44, 9) or *wḥm Ptḥ* "Herald of Ptaḥ" (Erman, *SPAW* 1916, p. 1147) and relations with Osiris were also close. The living Apis had his own dwelling place in Memphis called the *Ἀπιεῖον* (vide II, 153). He was chosen on the death of his predecessor on the basis of fixed bodily markings. According to H. he must be largely black with a white triangular spot on the brow and white fleck on the back in the form of an eagle, though neither representations nor sources are unanimous (H., III, 28; Reinisch, *Die äg. Denkm. in Miramer*, pl. 34-8; Gunn, *ASAE* 26 (1926), p. 84; Hopfner, op. cit., p. 78).

Bibliography : Hopfner, *Tierkult*, p. 76 ff.; Otto, *Stierkulte*, p. 11 ff.; Vandier, *La Religion Égyptienne²*, p. 233 ff.; Kees, *Götterglaube*, Index, s.v. Apis; Bonnet, *RÄRG* p. 46 ff.; Morenz, *Ägyptische Religion*, Index, s.v. Apis; Pietschmann, *RE* I, 2807 ff.; Roscher ap Roscher, *ML* I, 419 ff.; Grimm, *ZÄS* 95 (1968), p. 17 ff.

τρίχα ἦν καὶ ... καθαρός : Cf. III, 28 from which it is clear that the marks in question are those of the Apis Bulls—*τὴν γλῶσσαν ἐξειρύσας — ὑπὸ δὲ τῇ γλώσσῃ κάνθαρον* cf. Plin. *HN* VIII, 184; *κατορᾷ δὲ καὶ τὰς τρίχας ... πεφυκυίας — ἐν δὲ τῇ οὐρῇ τὰς τρίχας διπλάς*—cf. Eus., *PE* III, 13. The object was to determine that the ox did *not* possess these characteristics (*ἦν δὲ τούτων πάντων ᾖ καθαρός*) and thereby ensure that a future Apis was not sacrificed by mistake (Wilcken, *Chr* p. 114; id., *Grundzüge*, p. 126; *BGU* V, p. 79, 72; Hopfner, op. cit., p. 72).

δίζηται δὲ ταῦτα ἐπὶ τούτῳ τεταγμένος τῶν τις ἱρέων : In early times the examination took place under the supervision of a *wēb* priest (Erman-Ranke, *Ägypten*, p. 367). Later it was conducted by priests called in Gk. *Μοσχοσφραγισταί* (*BGU* I, 250, 6 ~ Wilcken, *Chr* p. 114 ff.; *POxy* I, 46, 11; *PGrenf* II, 64, 1; *PGen* 32, 1; *PStrassb* 1105 publ. Reitzenstein, *Zwei religionsgeschichtliche Fragen*, p. 7, n. 4; Otto, *Priester und Tempel*, I, p. 84; *BGU* V, p. 79, § 72; Kießling, *RE* XVI, 1, 356 ff.; Bonnet, *RÄRG* p. 748), whose lore was contained in the *Βίβλια Μοσχοσφραγιστικά* (Clem. Al., *Strom* VI, 4, 36; Kießling, op. cit., 357). According to Clem. (l.c.) the *Stolistae* carried out this rite, a statement taken by Otto (l.c.) to mean that the *Μοσχοσφραγισταί* belonged to this group. This view is probably erroneous (*BGU* V, p. 79, § 72). Hopfner (op. cit., p. 73) reasonably suggests that the examination was only conducted on animals from outside since those from the temple would be known to be pure. In ordinary cases examination of sacrificial animals could be conducted after slaughter (*LD* II, pl. 68; Dümichen, *Resultate*, pl. XI).

ἔπειτα γῆν σημαντρίδα ἐπιπλάσας ... τὸν δακτύλιον : The seal bore the representation of a man on his knees with hands bound behind his back and a sword at his throat (Plu., *DIO* 31 (*Mor* 363); Daressy, *Fouilles de la Vallée des Rois*, p. 37, no. 24089; cf. Gardiner, *Egyptian Grammar*^{3}, Sign List, A13).

ἀσήμαντον δὲ θύσαντι θάνατος ἡ ζημίη ἐπίκειται : Cf. II, 65, 5. Documentary evidence proves that the penalties were high but death is not mentioned, e.g. *ἀσφρα[γί]στους μόσχους οὐκ ἐξὸν θύειν· οἱ δὲ π[α]ρὰ ταῦ[τα θύσ]αντες κατακρινο[ν]ται δφ* (*BGU* V, p. 79, § 72). In the Roman Period the worshipper had to pay a tax for the sealing (Wilcken, *Chr* p. 115) and from Year 7 of Hadrian a certificate had to presented to the central government to the effect that the law had been obeyed (Wilcken, op. cit., p. 116; Otto, op. cit., II, p. 173).

θυσίη δέ σφι ἥδε κατέστηκε : There are at least two principles at work in Eg. sacrifice :

1. The god or deceased person is being fed. The three daily rituals of sacrifice are parallel to the three daily meals, a parallelism reflected in the nature of the offerings themselves (Helck-Otto, *Kleines Wörterbuch*^{2}, p. 260; Junker, *Götterdekret*, p. 20; Bonnet, *RÄRG* p. 547; Junker, *Gîza*, IV, p. 25 ff.; Otto, *Stierkulte*, p. 5 ff.).
2. The offerings are interpreted as the enemies of the god and the sacrifice as their destruction. This attitude is particularly prominent in *Schlachtopfer* and becomes increasingly important (*PT* 1543-49; Helck-Otto, l.c.; Kees, *NAWG* 1942, p. 71 ff.; *Urk* VI, passim; Kees, *Lesebuch*, no. 60; Bonnet, op. cit., pp. 124 ff., 549 ff.; Alliot, *Le Culte*, II, p. 524 ff.; Sethe, *Dram. Texte*, p. 153 ff.; Junker, *ZÄS* 48 (1910), p. 69 ff.; Otto, *Stierkulte*, p. 5 ff.).

39. ἀγαγόντες τὸ σεσημασμένον : For the procession vide Naville, *Deir el Bahari*, IV, pl. CXI; L*D* II, pl. 129. Large sacrificial animals (e.g. cattle) were butchered in special abattoirs (Klebs, *AR* p. 121 ff.; id., *MR* p. 171 ff.; cf. also Junker, *Gîza*, III, p. 229; v. Bissing, *Re-Heiligtum* I, pp. 15, 46; Davies, *El Amarna*, I, pl. XXVII ff.) while small animals were killed immediately before the offering table (Gayet, *Louxor*, pl. 16).

πρὸς τὸν βωμὸν ὅκου ἂν ϑύωσι : For *βωμοί* in general cf. n. II, 4, 2. In the case of burnt offerings special portable stands were generally employed (Schott, *Das schöne Fest vom Wüstentale*, p. 20 ff.; Wreszinski, *Atlas*, I, pl. 190, 196; *JEA* 11 (1925), pl. 2, 3) but proper altars for this purpose do occur (Wreszinski, op. cit., I, pl. 143; Jéquier, *RT* 32 (1910), p. 168; *Urk* IV, 629; Wolf, *Das schöne Fest*, pp. 19 ff., 25; Davies, *El Amarna*, I, pl. XXV; II, pl. XVIII; III, pl. VIII, X). Sometimes we find a normal offering table being so employed (Wreszinski, op. cit., pl. 156).

The rite of laying the offering on the altar is known as *w3ḥ ḫt* or *ṯst ḫt* "laying" or "raising up the offering" (Naville, *Deir el Bahari*, I, pl. XXI; Mariette, *Abydos*, I, pl. 40, 50b; L*D* III, pl. 67). It was followed by that known as *f3t* i.e. "raising" (sc. the offering in presentation) (Mariette, *Abydos*, I, pl. 47; id., *Dendérah*, I, pl. 65b; II, pl. 13a; Davies, *El Amarna*, II, pl. XX).

πῦρ ἀνακαίουσι : The use of fire in the Eg. *Opferdienst* is exemplified in all periods but its rôle is controversial.

(a) To roast meat.
(b) To destroy the offering
    1. To make it accessible to a distant god.
    2. To destroy the god's enemies.

Isolating these functions is difficult in specific cases :

(a) One principle of sacrifice is the food offering (vide supra) and roast meat will necessarily be involved. Texts and representations reflecting this rôle of fire are Junker, *Gîza*, V, p. 97, fig. 26; Wreszinski, *Atlas*, I, pl. 143, 190, 198; L*D* III, pl. 9c; Chassinat, *Edfou*, VII, p. 61, cf. 142; VIII, p. 89, 166 etc. Such offerings could still be treated symbolically as slain enemies of the god (Sethe, *Dram. Texte*, p. 153).
(b) There are certain cases where fire was used expressly to consume the offering :
    (1) M. K. examples of this practice occur in contexts where the sacrificer is some distance from Egypt and needs some means of getting the offering to the gods at home (Couyat-Montet, *Inscriptions Hiéroglyphiques et Hiératiques du Ouâdi Hammâmât*, p. 77 ff.

~ *BAR* I, § 436; Blackman, *MES* p. 46, 143 ff. ~ Lefebvre, *Romans et Contes*, p. 37).

(2) N.K. & L.P. texts refer to the destruction of a small portion of the sacrificial animal in the flames (Junker, *ZÄS* 48 (1910), p. 69 ff.), doubted by Kees (*NAWG* 1942, p. 83 ff.), probably wrongly; for texts such as *Edfou*, III, p. 196 ff. are too precise to be rejected on general grounds like "der Natürlichkeitssinn des Ägypters und die Bestimmung der Opfer als Ernährungsgrundlage der Tempelpriesterschaft" (p. 83)—the only argument he seems to have! Holocausts, i.e. destruction of the entire animal, are occasionally demonstrable (*Berlin Ritual für Amon und Mut*, I, pl. XVI, 3; Alliot, *Le Culte*, II, p. 521 ff.; Mariette, *Dendérah*, IV, pl. 85b). Kees would restrict the custom to specifically Sethian animals (op. cit., p. 86 ff.) but since the concept of the destruction of the sacrifice as an enemy of the god receiving it dominates the texts in later times (Junker, op. cit., p. 73 ff.; Kees, op. cit., passim; Bonnet, *RÄRG* p. 549 ff.), this restriction seems rash.

ἔπειτα δὲ ἐπ'αὐτοῦ οἶνον κατὰ τοῦ ἱρηίου ἐπισπείσαντες : Well substantiated in Eg. sources (v. Bissing, *Re-Heiligtum*, III, pl. 23, 372; Alliot, *Le Culte*, I, pp. 310, 388; II, p. 521; Griffith, *Stories of the High Priests*, p. 23, 26). The theological function of the wine varies :

(a) It is a drink-offering (*PT* 1511; Junker, *Gîza* IV, p. 26; id., *ZÄS* 43 *Priests*, (1906), p. 101 ff.).
(b) It is a means of purification and dedication (v. Bissing, *RT* 23 (1901) p. 42; Junker, *Stundenwachen*, p. 82).
(c) It can serve to tame a fiery god (Roeder, *Rel. Urk.*, p. 144).
(d) In the sense of the offering as enemy (vide supra) it can be regarded as the blood of Ḥorus' enemies (Naville, *Mythe d'Horus*, pl. 13, 19-21; Plu., *DIO* 6 (*Mor* 353)).

καὶ ἐπικαλέσαντες τὸν θεόν : This invocation is described in Eg. texts as *ỉnt nṯr r šb*(*w*)·*f* "Inviting the god to his offering" (Naville, *Deir el Bahari*, II, pl. XXVIII; Mariette, *Abydos*, I, pl.37b, 40a, 51b) .The formula would vary from context to context. An ancient and very formal address is *m n·k* "Take to yourself" (Caminos, *Chronicle of Prince Osorkon*, § 49, p. 34 d) Longer invocations are, however, frequent of which two examples :

> "Come to these your loaves and to your roast joints".
>
> Gayet, *Louxor*, pl. 35.
>
> "Come, pray, O Osiris, Lord of Busiris, Chief of the Westerners, Great God, Lord of Abydos, and see this beauteous thing on this day. The Osiris *N.N.* casts down for you your foes. He has brought to you in fetters the vile rebel with his arms beaten and his legs smitten".
>
> *Urk* VI, 38.

σφάζουσι : "cut its throat" (*LSJ* p. 1738, a, s.v. *σφάζω* I). The larger animals would be trussed up and thrown down. Slaughtering by cutting the throat was standard practice (Klebs, *AR* p. 112 ff.; id., *MR* p. 17 ff.; Gayet, op. cit., pl. 16, 68; v. Bissing, *Re-Heiligtum*, I, p. 15, 46; Davies, op. cit., II, pl. XVIII; Couyat-Montet, l.c.; Naville, *Deir el Bahari*, IV, pl. CVII; Steindorff, *Das Grab des Ti*, pl. 72; Alliot, op. cit., II, p. 521; cf. Winlock, *Models of Daily Life*, pl. 19 for a secular but intriguing counterpart; Roeder, *Denkmäler Pelizäus*, p. 73, 1694). When the throat had been cut the blood was smelled to establish its purity (Quibell, *Ramesseum*, pl. XXXVI).

ἀποτάμνουσι τὴν κεφαλὴν : Representations of decapitated offerings are legion and the head is often depicted alone as an offering. Decapitation was not, however, always carried out (Naville, op. cit., IV, pl. CIX-CX; VI, pl. CLV; L*D* II, pl. 129; IV, pl. 25 has representations of offerings with and without heads; Davies, *Five Theban Tombs*, pl. VII-VIII; Kamal, *CGC. Stèles Hiéroglyphiques Ptol. Rom.*, pl. LVI, 22182; Chassinat, *Dendara*, I, pl. LXXVI). Texts referring to this rite are *PT* 1545c; *Urk* VI, 44, 48; Daressy, *ASAE* 13 (1913), p. 264; Chassinat, *Edfou*, VII, p. 261; Otto, *Mundöffnungsritual*, II, p. 73 ff.

σῶμα μὲν δὴ τοῦ κτήνεος δείρουσι : Skinning of sacrifices is occasionally represented (Naville, op. cit., IV, pl. CVII; L*D* II, pl. 66-67; Steindorff, op. cit., pl. 72).

κεφαλῇ δὲ κείνῃ πολλὰ καταρησάμενοι φέρουσι : The evidence is contradictory. In favour :

1. Confirmation from classical sources (Plu., *DIO* 31 (*Mor* 363); Ael., *HA* X, 21).
2. An old text lists the head with the tail and the hoofs of the sacrifice

and seems to imply its insignificance (*PT* 1549 ~ Kees, *Lesebuch*, no. 60; id., *Ägypten*, p. 70).

3. It would suit the symbolism of sacrifice very well (vide supra). In fact, the head in the *Opferdienst* was regarded as the head of Seth (Sethe, *Dram. Texte*, p. 153, 47b; *Urk* VI, 14-15).

4. In the *Mundöffnungsritual* the foreleg and heart of goats, gazelles, geese and bulls are regularly offered whereas the head is not (Otto, op. cit., I, p. 43 ff.; II, p. 73 ff.).

5. The ritual of the Osiris temple at Abydos contains a curse against the heads of the foes of Osiris pronounced during the sacrifice of animals who are regarded as the enemies of Seth (*Urk* VI, 48 ff.).

6. So strange a custom is unlikely to be a fabrication, especially since the mention of Gk. *ἔμποροι* places it well within the Gk. sphere of knowledge.

Against :

1. Often the heads of cattle, sometimes antelopes, appear in offering dishes (e.g. Nelson et al., *Medinet Habu*, III, pl. 172). Heads are mentioned as offerings (Sethe, op. cit., pp. 148, 153) and at Edfu Ḥorus actually keeps the head (Alliot, *Le Culte*, II, p. 787).

2. The head of a cow and sometimes a goose is used in the sign for offering (Gardiner, *Egyptian Grammar*^{3}, Sign List, F1).

This contradictory evidence can perhaps be reconciled. In Eg. temple ritual the manual rite was accompanied by an oral rite. Thus, the act of offering the head as a trophy of victory over Seth and his followers would be accompanied by suitable prayers and imprecations. Is it not conceivable that *καταρησάμενοι* and *καταρῶνται* refer to the oral rite at the offering ceremony and that its form was so curious that H. or his source concentrated on that to the exclusion of the manual rite? If so, H.'s account has foreshortened the ritual by omitting the act of presentation which is so often depicted and which formed the occasion of the imprecation. It is by no means impossible that the head was then carried away and disposed of in the ways suggested by H. Erman, on the other hand, suggested that the custom of cursing the head was a late development of foreign origin (*Die Religion*, p. 336 ff.). Be that as it may, the evidence appears to be on H.'s side in this matter.

τοῖσι μὲν ἂν ᾖ ἀγορὴ ... ἐκβάλλουσι ἐς τὸν ποταμόν : Introduction, p. 24 ff.

καταρῶνται δὲ τάδε λέγοντες ... ταύτην τραπέσθαι : A striking parallel to the Hebrew concept of the scapegoat (cf. *Leviticus* 16, 6, 21). The sentiments of the curse do not seem to occur in our Eg. sources on the temple cult but the basic purpose, averting evil, is evident in the liturgy and rituals of *Urk* VI, 40-1. The curse pronounced on the head there, however, (op. cit., 49; vide supra) is quite different in character (cf. op. cit., 42-3).

κατὰ μέν νυν τὰς κεφαλὰς τῶν θυομένων κτηνέων : There clearly were differences in the treatment of the head (vide supra).

καὶ ἀπὸ τούτου τοῦ νόμου ... Αἰγυπτίων οὐδεὶς : The present writer finds no evidence of this. However, the presence of heads as offerings in Eg. temples right into the Ptol.-Roman Period does not disprove it since they are probably not food offerings (vide supra). On the other hand, late representations of heads as mortuary offerings (vide Kamal, *CGC. Stèles Hiéroglyphiques Ptol. et Rom.*, pl. XIII, 22041; LVI, 22182; LXXIII, 22210; id., *Tables d'Offrandes*, pl. XLI, 23162; LI, 23240) —a context where the concept of sacrifice as nourishment was much stronger—might suggest that they *were* eaten in H.'s time, as they certainly were at an earlier period, but such late evidence is best not used against H. for two reasons :

I. The possibility of conservatism in iconography always remains open.
II. It is conceivable that the heads were no longer regarded as food but had been reinterpreted as the heads of the foes of the recipient conceived as Osiris.

ἡ δὲ δὴ ἐξαίρεσις τῶν ἱρῶν καὶ ἡ καῦσις ἄλλη περὶ ἄλλο ... κατέστηκε : There were certainly differences in methods of sacrifice but evidence is not adequate for a detailed evaluation of H.'s statement :

1. The dedication of the offering could be different. Sometimes the king/officiant stretches out a sceptre four times (Naville, *Deir el Bahari*, III, pl. LXXVII; Gayet, *Louxor*, pl. 34, 51, 69; Davies, *El Amarna*, I,

pl. XXVII; II, pl. VII; VI, pl. XXVI). On other occasions the hands are simply stretched out over the offerings (Mariette, *Abydos*, I, pl. 47).

2. Large animals were slaughtered in special abattoirs whereas small ones were butchered in the presence of the god (vide supra, p. 173).
3. The nature of the altar could vary (vide supra, p. 174).
4. Differences of *καῦσις* are discernible in that sometimes part, sometimes the whole of an offering was consumed (vide supra, p. 174 ff.).
5. There are clear differences between the offering ritual of Rēʿ and Ḥorus at Edfu (Alliot, *Le Culte*, II, p. 521).
6. While *ἐξαίρεσις* is mentioned for the red goat and the red ox at Edfu (Alliot, op. cit., II, p. 522) nothing is said of it in the sacrifice of the hippopotamus (Alliot, op. cit., II, p. 787).
7. Local differences are indicated in Chassinat, *Mystère d'Osiris*, p. 91 ff.

τὴν δ'ὧν μεγίστην τε δαίμονα ἥγηνται ... ἐρέων : At this period Isis (Roeder, *RE* IX 2091; Meyer ap Roscher, *ML* II, 360 ff.; Sourdille, *Hérodote et la Religion*, p. 99; Kees, *Götterglaube*^{2}, p. 409 ff.; Erman, *Die Religion*, p. 390 ff.; Hopfner, *Tierkult*, p. 68; Münster, *Untersuchungen zur Göttin Isis*, p. 154; Bergman, *Ich bin Isis*, p. 132 ff.; Bonnet, *RÄRG* p. 328 ff.).

κοιλίην μὲν κείνην πᾶσαν ἐξ ὧν εἶλον : *κοιλίη ... κείνη* "intestines" (*LSJ* p. 966, b, s.v. *κοιλία* I, 3). Removal of the entrails is clearly stated at Edfu

> "Let there be brought a red goat and a red ox and his entrails taken out; let there be made a great burnt offering, its stomach being filled with all sweet smelling spices" (Alliot, op. cit., II, p. 521).

σπλάγχνα δὲ αὐτοῦ λείπουσι ἐν τῷ σώματι : *σπλάγχνα* "inward parts" including the heart (*LSJ* p. 1628, a, s.v. *σπλάγχνα*). Such a custom would be astonishing to a Gk. as yet another way in which Egs. did everything differently (cf. II, 35); for the Gks. removed the *σπλάγχνα* and ate them *Il* I, 464; *Od* III, 9; ib., XX, 252; *SIG* 1002, 5; 1044, 39 ff. etc.). The evidence known to the present writer contradicts H. :

1. *PT* 1547c *ḥ3t·f n Sḫmt wrt* "his heart falling to Sekhmet the Great One". The heart is part of the *σπλάγχνα*. Therefore, this text, referring

to the dismemberment of the offering, suggests that part of the *σπλάγχνα* was removed.

2. Naville, op. cit., IV, pl. CVII—*stp ḫpš·f šd ḥ3t·f* "cut off its leg and take out its heart".
3. Schott, *Urk* VI, 82. The heart is extracted.
4. Daressy, *ASAE* 13 (1913), p. 264. The heart is removed.
5. Otto, l.c. The heart is taken out.

καὶ τὴν πιμελήν : "soft fat, lard" (*LSJ* p. 1404,b, s.v. *πιμελή*). Fat was consumed in burnt offerings in Ancient Egypt and was imagined to ascend and delight the god with its aroma (Chassinat, *Edfou*, VII, pp. 102, 213, 301, 322 ff.; L*D* III, pl. 194, 35; *Wb* V, p. 41, 2). Kees believed, in fact, that only fat and special portions were consumed (cf. Chassinat, op. cit., VIII, p. 169; Kees, *NAWG* 1942, p. 85).

σκέλεα δὲ ἀποτάμνουσι : Evidence for removal of the legs, particularly the right foreleg is overwhelming (cf. refs. *σφάζουσι* and *σπλάγχνα*) the latter being occasionally cut as a mortuary offering from a living animal (Junker, *Gîza* III, p. 229; Wiedemann, *AfR* 22 (1923-4), p. 80 ff.). To facilitate these operations sacrificial animals were usually trussed up in such a way as to leave only the right leg free.

τὴν ὀσφὺν ἄκρην ... τοὺς ὤμους ... τὸν τράχηλον : The evidence is not sufficiently precise to substantiate such details but these cuts would presumably be included amongst the *stp*(*w*)*t* "choice joints" (*Wb* IV, pp. 336, 14-337, 1) which were cut from the sacrifice and carried to the god (Naville, op. cit., IV, pl. CIX).

ταῦτα δὲ ποιήσαντες ... ϑυωμάτων : The general truth of this statement is certain (Alliot, op. cit., II, p. 521).

ἄρτων καϑαρῶν : Probably the same loaves as were baked for the priests (n. II, 37, 4). The present writer has failed to parallel this in detail. Loaves were, however, offered to the gods at all periods (L*D* III, pl. 48; Gayet, *Louxor*, pl. 6; Bénédite, *Philae*, pl. VI, XXXII; Chassinat, *Dendara*, IV, pl. CCLXXIII etc.).

μέλιτος : The use of honey in this way cannot be verified but is not unlikely. It was employed as a funerary offering (*BAR* II, § 571). Its rôle in the temple ritual, particularly of Min, was considerable (Montet, *JNES* 9 (1950), p. 18 ff.). Large quantities were dispensed to the temples in the Great Harris Papyrus (Erichsen, *P. Harris I,* 32b, 3; 36a, 5 etc.) and it occurs frequently in offering lists (e.g. Nelson et al., *Medinet Habu,* III, pl. 146).

ἀσταφίδος : "raisins". The present writer finds no evidence of raisins in Ancient Egypt. It is, however, possible that the word *ỉ3rrt* "grapes" (*Wb* I, p. 32, 12-14) also means "raisin" since its Copt. derivative ελοολε can certainly have that sense (Crum, *CD* p. 54, b)—and *ỉ3rrt* often occur as offerings to the gods (Nelson et al., l.c.; L*D* III, pl. 125, 143).

σύκων : "figs"—frequent in the offering lists for the dead and the gods (*PT* 91d, 110; L*D* III, pl. 125b; Calverley, *The Temple of King Sethos I,* II, pl. 32; *Wb* V, p. 417, 10-11). This proves the general truth of H.s statement even though the details cannot be paralleled.

σμύρνη : "myrrh" whose use, along with frankincense, is certain in the *Opferdienst* for all periods (*Wb* I, pp. 206, 7-14; 207, 1-3; IV, pp. 180, 18-22; 181, 1-13). The function of incense is clear :

1. Since it drove away unpleasant odours, it was regarded as a purifier (cf. *BD* CV, 3).
2. As a purifying agent it was believed that it expelled demons (*BAR* IV, §§ 865, 871; Junker, *Stundenwachen,* p. 90; Lexa, *Magie,* I, p. 103).
3. It was considered to have a divinizing power (*PT* 365, 376 ff.).

Further details ap Bonnet, *ZÄS* 67 (1931), p. 20 ff.; id., *RÄRG* p. 624 ff.

ἔλαιον ἄφθονον καταχέοντες : Oil was much used in the cult in connection with which we often hear of seven (e.g. L*D* II, pl. 49; Newberry, *Beni Hasan,* II, pl. XV), sometimes nine sacred oils. Theologically it served various functions :

1. It was a healing agent and was, therefore, considered to impart new life (*PT* 1800 ff.; Moret, *Le Culte Divin Journalier,* p. 76).

2. Oil imparts a shine which was imagined as dazzling enemies and it could, therefore, be regarded as an instrument of power (*PT* 53; Moret, op. cit., p. 198).
3. It was pleasant to smell, a quality of the gods (Roeder, *Rel. Urk.*, p. 298), and as such was believed to impart a divine nature to anything it covered.

For libations of oil poured over the offerings cf. Davies, *Tomb of Two Sculptors*, pl. V, p. 29. In general Bonnet, *RÄRG* p. 647 ff.

προνηστεύσαντες δὲ θύουσι : There are data which suggest that H. may be right :

1. Clem. Al. (*Strom* VII, 6, 33) mentions that there were strict regulations on the eating habits of priests *ἐν ταῖς κατ'αὐτοὺς ἁγνείαις*. This does not amount to fasting but is in the same order of things (cf. also Plu., *DIO* 5-6 (*Mor* 352-3); Jerome, *Adv. Iovin* II, 13; Apuleius, *Met* XI, 28).
2. A Ptol. text hints at rites of preparation which may well have involved fasting (Alliot, op. cit., p. 668, n. 3).
3. There is evidence of fasting as a sign of mourning (Pleyte-Rossi, *Papyrus de Turin*, 1-2, pl. 137, l. 3).
4. There is evidence of abstinence from food and/or drink during the epagomenal days, the Sokar Festival and the Great Festival of Osiris on Day 22 of the 1st Month of *3ḫt* (Schott, *Festdaten*, p. 10).

These general indications are, however, the most available; for no Eg. text known to the present writer confirms H. absolutely.

Fasting was by no means unknown in Greece (Pl., *Lg* XII 953e; Clem. Al., *Protr* II, 21; Plu., op. cit., 69 (*Mor* 378)) and is world-wide as a rite of preparation (MacCulloch, *HERE* V, p. 759 ff.).

καιομένων ... τύπτονται πάντες : A very curious statement when we consider the symbolism involved. If the offering is the foe of the god, why lament? In fact, the spell pronounced at Abydos during the burning of the sacrifice was one of triumph not distress (*Urk* VI, 48 ff.). Two explanations suggest themselves :

1. Though the offering = Seth is being destroyed, the officiants may

have felt obliged to lament his fate simply to ward off his wrath, i.e. the rite is apotropaic in character.

2. In the ritual of Osiris we find a striking passage describing the distress of the subjects of Seth at the downfall of their erstwhile lord (*Urk* VI, 15). Is it not possible that attendant priests recited or sang such words and mimed them at the same time? If so, *τύπτονται* would make complete sense. Certainly the text from the Osiris liturgy does not occur in the liturgy of offering in the strict sense but variations would be possible and, in any case, it is conceivable that H. has telescoped the ritual as he appears to have done elsewhere (vide supra, p. 177).

Whatever the explanation, however, the general accuracy of H.'s account of Eg. sacrifice inclines one to accept that a rite of lamentation was performed at least some time during the *Opferdienst*.

δαῖτα προτίθενται τὰ ἐλίποντο τῶν ἱρῶν : From time immemorial in Ancient Egypt offerings in temples and the mortuary service constituted an important source of income to the priests (vide supra, p. 167).

τὰς δὲ θηλέας οὔ σφι ἔξεστι θύειν ἀλλ'ἱραί εἰσι τῆς Ἴσιος : Cf. II, 18, 2. *Ἶσις* = Eg. *3st*; Copt. ⲏⲥⲉ, ⲉⲥ; Cuneiform *ešu/eš* (Ranke, *APAW* 1910, Anhang, pp. 39, 40 ff.; identified with Demeter II, 59, 156). Isis, the sister and wife of Osiris, was only connected with cows at a relatively late period. She is identified with Seshat-Ḥor and Ḥesat only in the L.P. while her connection with Shentait, though beginning in the XIXth Dyn., also only becomes important at that time (Münster, *Untersuchungen zur Göttin Isis*, p. 154). Furthermore, her gradual fusion with Ḥatḥor led to her taking over Ḥatḥor's iconography with the cow's horns and solar disc only in the N.K. (Bonnet, *RÄRG* p. 328 ff.; Sourdille, *Hérodote et la Religion*, p. 99). In late Eg. religion the connection between Isis and the cow becomes so important that Plu. can speak of the animal as the *Ἴσιδος εἰκόνα* (*DIO* 39 (*Mor* 366)). For the cow in the Isis mysteries cf. Apuleius, *Met* XI, 11.

Cow sacrifices are, in fact, mentioned in *PT* 716c and Hopfner (*Tierkult*, p. 70) accepts them as part of the mortuary ritual. Further, hornless cows are represented being led to slaughter in the O.K. (Wreszinski, *Atlas*, III, pl. 86A; cf. also Roeder, *Denkmäler Pelizäus*, p. 74;

probably Naville, *Tb* I, pl. 4; Lefébure, *Sphinx* 8 (1904), p. 7). H. is, however, probably right for his own period :

1. Although cow sacrifice is known in Ancient Egypt, the cases are very rare and early (Bonnet, *RÄRG* p. 405).
2. The prohibition is confirmed by other ancient writers (Athanasius, *Hist Arian* 56; Porph., *Abst* II, 11).
3. Even in recent times in Egypt it was impossible to kill cows without government permission (Hopfner, op. cit., p. 71).

We may, therefore, assume that the practice had died out in the L.P.

τὸ γὰρ τῆς Ἴσιος ἄγαλμα ἐὸν γυναικήιον βούκερών ἔστι : Large stone statues of Isis are rare but many bronzes survive from the L.P. She is almost always represented anthropomorphically with a crown on her head consisting of horns and often the solar disc and ostrich feathers (Daressy, *CGC. Statues de Divinités*, p. 217 ff.). This head-dress can, however, be replaced with the hieroglyph of her name (Meyer ap Roscher, *ML* II, 367 ff.).

κατά περ Ἕλληνες τὴν Ἰοῦν γράφουσι : Confirmed by texts and reps. :

1. Io appears as a *βουκέρως παρθένος* ap A., *Supp* 569; *Pr* 588; D.S., I, 24, 8; Call., *Epigr* 57 (Wil.).
2. Iconography shows bovine elements at all stages in its evolution :

(a) A cow—the oldest form.
(b) Horned maiden—about the beginning of the 5th Century B.C.
(c) A return to the cow-form.

Engelmann ap Roscher, *ML* II, 270 ff.; Curtius, *Die Wandmalerei Pompejis*, Index, s.v. Io; Paribeni, *EAA* IV, p. 169 ff.

In general v. Geisau, *KP* II, 1426 ff.; Preller-Robert, *GrM* I, pp. 161, 395 ff.; II, p. 253 ff.; Schubert, *Artemis Lexikon*, 1389; Engelmann ap Roscher, *ML* II, 263 ff.; Eitrem, *RE* IX, 1732 ff.

καὶ τὰς βοῦς τὰς θηλέας ... μάλιστα μακρῷ : The wide currency of cow-worship in Egypt is beyond doubt; for the cow goddess Ḥatḥor, with whom Isis was fused, enjoyed a cult in some form or another throughout the country (Hopfner, op. cit., p. 68; Bonnet, *RÄRG* p. 402).

τῶν εἵνεκα ... φιλήσειε ἂν τῷ στόματι : The *Küssverweigerung* is found amongst the early Christians (Dölger, *AuCh* 4 (1934), p. 266 ff.; id., ib. 5 (1936), pp. 51 ff., 147 ff.; id., ib. 6 (1950), p. 76 ff.). On Eg. attitudes to foreigners in general vide Helck, *Saeculum* 15 (1964), p. 103 ff.

τὰς μὲν θηλέας ἐς τὸν ποταμὸν ἀπιεῖσι : This has been doubted for several reasons :

1. The cow was too sacred to be treated in this way (Wiedemann, *Kommentar*, p. 193; Hopfner, op. cit., p. 71).
2. The Nile would become fouled up if all cows were thrown into it (l.c.).

Hopfner's remedy is to suggest that after sacrifice or slaughter the refuse was thrown into the river (p. 71). Kees is equally sceptical (*Götterglaube*², p. 77). The arguments are not compelling :

1. Death in the Nile involved *Vergöttlichung* (n. II, 90) and in that light the practice would make sense (Bonnet, op. cit., p. 405).
2. Isis was the wife of Osiris who was often identified with the Nile (Bonnet, op. cit., p. 527 ff.). To cast the cow, Isis' embodiment, into the arms of her husband seems reasonable (Lüddeckens ap Marg, *Herodot*, p. 442 ff.).
3. Fouling the Nile is not a cogent argument against the practice (Lüddeckens, op. cit., p. 442 ff.) :

(a) The Egs. will not have concerned themselves about such matters.
(b) In modern times during *Rinderpest* epidemics the corpses of cattle have been observed in considerable quantities in the Nile.
(c) Crocodiles (on which n. II, 90) and vultures would have quickly despatched many of the bodies.

We conclude that, although positive proof is not available, this practice makes sense in the light of our knowledge of L.P. theology.

τοὺς δὲ ἔρσενας κατορύσσουσι ... τῆς Προσωπίτιδος καλεομένης νήσου : There is the following evidence :

1. Gaillard-Daressy (*La Faune Momifiée*, p. 17) claimed that mummified bodies examined by them had first putrified, then been exhumed and finally smeared with bitumen.

2. Animal mummies are often found on examination to be made up of parts of several different bodies. This could be the result of confusion arising from getting the corpses together and transporting them to their place of burial (Cailliaud, *Voyage à Meroé*, I, p. 13; Maspero, *Causeries d'Égypte*, p. 247; Lortet-Gaillard, *La Faune Momifiée*, I, p. 41 ff.). It should be observed that the four skeletons discussed by the latter are *male*.

3. At Armant the Buchis bulls were buried in a seated position with heads and horns supported in the vertical position (Mond-Myers, *The Bucheum*, I, p. 58). The practice of leaving the horns visible will have facilitated finding the corpses (Lüddeckens, op. cit., p. 443 ff.).

This evidence does not amount to mathematical proof but it is enough to indicate that H. is likely to be substantially, if not completely, correct.

ἡ δ'ἔστι ... πάντες : There are two intimately related topographical problems :

(a) The site of the *Προσωπῖτις νῆσος*.
(b) The site of *'Ατάρβηχις*.

(a) *Προσωπῖτις νῆσος* : Data as follows :

1. Str. (XVII, 1, 20 (C802)) & Ptol. (*Geog* IV, 5, 49) both speak of a Prosopite *Nome*, Th. (I, 109) and H. of a Prosopite *Island*. The dilemma is solved by H. II, 165 which must mean that the terms *νῆσος* and *νόμος* were interchangeable.
2. It lies in the Delta (H., II, 41, 5).
3. It has a perimeter of 9 schoinoi (l.c.) and its considerable size is confirmed by the general tenor of Th., I 104 & 9.
4. It contains many cities, one of which is Atarbechis (l.c.).
5. The Athribite and Prosopite Nomes lie on the border of the Busirite Nome (Str., l.c.).
6. The Prosopite Nome contains a city of Aphrodite (Str., l.c.; cf. also *POxy* XI, p. 203 ff.).
7. It lies E. of the Great River (Ptol., l.c.).
8. Its capital was in Ptol's time Nikiou (l.c.).

All sources agree that the *Προσωπῖτις νῆσος/νόμος* lay in the Delta. Both the vacillation in name and the details of the Persian siege ap Th., I, 109 must imply that the nome was surrounded by water. Since Str. is proceeding from W. to E., 5 must mean that the P.N. lay W. of the Busirite and Athribite Nomes, i.e. in the W. Delta, a fact confirmed by the strategic situation implicit if not stated in Th. Since Ptol.'s Great River is the Canopic Branch (Ball, *Egypt in the Classical Geographers*, p. 120) the P.N. must correspond exactly or approximately either to the 4th or the 5th Nomes of L.E. Nikiou, according to Ptol. the capital, lay in the 4th Nome of L.E., probably at Zawiyet Razin. We may, therefore, conclude that the *Προσωπῖτις νόμος* corresponded at least approximately to the 4th, the Southern Neith. Therefore, the waterways forming the *νῆσος* will probably have been the Canopic and Phatnitic/Sebennytic Branches of the Nile and some northern waterway corresponding to the boundary of the nome (cf. Ball, op. cit., p. 70; Gomme, *HCT* I, p. 321). The populous nature of the 4th Nome is indicated by Gauthier (*DG* Index, s.v. IV^{e} Nome) who mentions 17 towns as belonging to it, though 5 are somewhat doubtful. To these Montet (*DG* I, p. 79) is able to add another one.

Bibliography : Daressy, *ASAE* 12 (1912), p. 200 ff.; id., ib. 16 (1916), p. 234 ff.; Gauthier, *MIE* 25 (1935), pp. 4, 35, 90, 101; Montet, *DG* I, p. 78 ff.; Ball, *Egypt in the Classical Geographers*, p. 70; Hommel, *Ethnologie*, p. 901 ff.; Yoyotte, *BIFAO* 55 (1955), p. 125 ff.; Salmon, *La Politique Égyptienne d'Athènes*, p. 169 ff.

(b) *'Ατάρβηχις* : The name may occur as *Pi-ḫa-at-ti-ḫu-ru-un-pi-ki* in the Assyrian lists (Streck, *Assurbanipal*, II, p. 398). To identify this settlement we have the following data :

1. It lay in the Prosopite Island/Nome.
2. The name.
3. It had a temple of Aphrodite (H., II, 41; cf. Str., l.c.).
4. In the vicinity there must be a large bull cemetery.

1. places Atarbechis in the 4th Nome of L.E.
2. The discovery of the Eg. prototype of the name *'Ατάρβηχις* may well help in fixing the site. Several interpretations have been offered :

(a) *Ḥtḥr-b3ḳt* (Pietschmann, *RE* II, 1896; Calderini, *Dizionario dei Nomi Geographici*, I (2), p. 252).

(b) *Ḥwt Ḥr Bỉk*, a hypothetical name which has two supports : I. *Ḥr bỉk* occurs *ʽΕλληνιστί* suitably vocalized in names like *Παταρβῆκις*, *Παταρβῆχις*, *Πετεαρπτῆκις*, *ʼΑρβῆκις*/*ʼΑρβῆχις* (Spiegelberg, *RT* 22 (1900), p. 161 ff.; Lüddeckens, op. cit., p. 441). II. Names from the Prosopite Nome show a tendency to use the word *bỉk* (Yoyotte, *BIFAO* 55 (1955), p. 139). S. denies the possibility of Ḥatḥor's being the first element because the vowel "*α*" in "*ταρ*" would not arise from the "o" of Ḥatḥor.

(c) *(Pr) Ḥwt Ḥr Mfk(3t)* "(House of) Ḥatḥor (Mistress of) Turquoise" = Kom Abu Billu (Griffith, *Tell el Yahûdîyeh*, p. 62; *PM* IV, p. 67; Daressy, *ASAE* 12 (1912), p. 200 ff.; ib. 16 (1916), p. 234 ff.; Montet, *DG* I, p. 61; Gauthier, *DG* II, p. 118; Gardiner, *AEO* II, p. 161*).

3. Aphrodite was identified with the Eg. goddess Ḥatḥor (Bonnet, *RÄRG* pp. 46, 277). This suits Kom Abu Billu very well. (vide supra).

4. Near Kom Abu Billu a cemetery of cattle has been found (Edgar, *ASAE* 13 (1913), p. 281).

It will be clear from this summary that Kom Abu Billu is a strong candidate. The only factors against it are :

(a) That it lies W. not E. of the Canopic Branch and, therefore, does not fall within Ptol.'s boundaries for the Prosopite Nome. This is not a damning objection, however, since nome boundaries tend to fluctuate and there is definite evidence that Terenuthis = Kom Abu Billu was part of the Prosopite Nome in the 2nd Century A.D. (*BGU* II, 453, 2 and 648, 3; *PGen* 29, 2; Yoyotte, op. cit., p. 126).

(b) If we take Kom Abu Billu to be Atarbechis it will not be anything like within the Prosopite island. Either H. has confused two shrines of Ḥatḥor /Aphrodite in the Prosopite Nome, one E., one W. of the Canopic Branch (Montet, op. cit., p. 62) or the term *νῆσος* was used loosely to cover even the westernmost extensions of the nome, possibly a later addition or, and most likely, the circumstances of the Athenian disaster in c. 456 irremediably associated the word "Prosopite" with the Island and H. automatically assumed that the city which he was told lay in the Prosopite Nome was in fact *ἐν τῇ νήσῳ*.

(c) Spiegelberg's philological objection against Ḥatḥor's being the first element in the name *ʼΑτάρβηχις* is surely not strong enough in itself to invalidate the other evidence especially since our knowledge of Eg. vocalization is so precarious that such dogmatism seems most inadvisable.

To sum up : Atarbechis was probably situated on the site of Kom Abu Billu to the W. of the Canopic Branch of the Nile. Its ancient name, the presence of the cattle cemetery, its connection with Ḥatḥor and the evidence that at least at one period it lay in the Prosopite Nome are arguments not lightly set aside. This would place it outside the *νῆσος* but H.'s statements that it lay inside can easily and plausibly be explained.

Bibliography : In addition to that mentioned in the text see D'Anville, *Mémoires*, p. 81; Quatremère, *Mémoires*, I, p. 424; Hommel, *Ethnologie*, p. 862; Bonnet, *RÄRG* p. 57.

ἐκ ταύτης τῆς πόλιος ... ἐς ἕνα χῶρον : All bulls were certainly not buried at Atarbechis :

1. Major sacred bulls such as Apis and Buchis had their own special cemeteries—for the first the Serapeum (*PM* III, p. 205 ff.), for the latter the Bucheum (op. cit., V, p. 158 ff.).
2. Numerous cemeteries for ordinary bulls are known e.g. Abusir and Saqqara. Their size makes it quite clear that they served a wide area and that H. has simply exaggerated the range of the activities of the Atarbechites (Bonnet, op. cit., p. 820).

There is, however, good evidence that in the Ptol. Period there were officials who travelled about seeking the bodies of sacred animals in order to bury them (Preisigke-Spiegelberg, *Die Prinz-Joachim-Ostraka*, pp. 2, 14, n. 5). Probably H., as often, has over-generalized (Introduction, p. 147 ff.).

42-46. With the digression on Herakles 43-5 this section is concerned with or inspired by the ram cults of Ancient Egypt (cf. also D.S., I, 84; Str., XVII, 1, 19 (802C); 40 (812C); Plu., *DIO* 74 (*Mor* 380); Lucianus, *Sacr* 14; Suidas, s.v. *Μένδην*). Sheep were kept in large numbers in Ancient Egypt (L*D* II, pl. 9, 106b, 132) and many cases of sacred rams are known (e.g. Khnum, Ḥeryshef and Kherti), the most famous being the two discussed here by H., those of Amon-rēʿ and Khnum-rēʿ (Hopfner, *Tierkult*, p. 89 ff.; Bonnet, *RÄRG* p. 867 ff.). This rôle the ram owed to its associations with fertility (cf. D.S., I, 88; Suidas, l.c.; Brugsch, *Thes.*, p. 626; id., *DG* pp. 219, 635; Burchardt, *ZÄS* 47 (1910), p. 112; *Urk* VI, 74, 9), which in turn probably derive from its relatively large genitals (Hopfner, op. cit., p. 90). The species taken as the *Inkarnationsexemplare* was originally *Ovis longipes palaeoaegyptiacus* and for iconographic purposes usually stayed so even when the species became extinct (e.g. the Ram of Mendes). Amon-rē‘'s sacred ram, as a relatively late introduction, was *Ovis platyra aegyptiaca.* Clearly, the gradual extinction of *Ovis longipes* caused the older cults grave embarrassment and in order to supply the deficiency two alternatives were adopted :

1. Some took their divine animal from *Ovis platyra* (so Khnum of Elephantine, Keimer, *ASAE* 38 (1938), pp. 315, 697 on the basis of mummies).

2. Some used a goat of a species resembling *Ovis longipes* i.e. *Hircus mambrinus* (so at Mendes, Keimer, op. cit., p. 695; Bonnet, op. cit., p. 868; Kees, *Götterglaube*^{2}, p. 73).

42. ὅσοι μὲν δὴ Δίος Θηβαιέος ἵδρυνται ἱρόν : For *Ζεὺς Θηβαιεύς* cf. I, 46; II, 18, 32, 55; Eg. *'Imn-r‘* generally identified in classical times with Jupiter/Zeus (D.S., I, 12, 97; Str., XVII, 1, 27 (C805), 46 (C816); Plu., *DIO* 9 (*Mor* 354); Curt., IV, 7, 16). The identification reflects Amūn's rôle as *'Imn-r‘ nsw nṯr*(*w*), "Amon-rē‘ King of the Gods", the epithet *Θηβαιεύς* the rôle of Thebes as Amūn's major cult centre.

The Theban Amūn had temples throughout Egypt and Eg. territory e.g. El Hibe, Akoris, Tanis, the Oases of Libya and particularly Nubia (cf. list Daressy, *RT* 32 (1910), p. 62).

Bibliography : Sethe, *Amun und die acht Urgötter*, p. 22 ff.; Bonnet, *RÄRG* p. 31 ff.; Pietschmann, *RE* I, 1853 ff.; Meyer ap Roscher, *ML* I, 283 ff.

νομοῦ τοῦ Θηβαίου : The parallelism with *ὅσοι δὲ τοῦ Μένδητος ἔκτηνται ... τοῦ Μενδησίου νομοῦ* proves that H. means "Theban Nome" in the strict sense of the term i.e. 4th Nome of U.E. not the Thebaid as the analogy of II, 91, 1 might suggest (vide n. ad loc.). Amūn first appears at Thebes in the XIth Dyn., probably from Hermopolis where he had been a member of the Hermopolitan Ogdoad. The process of acclimatization in the Theban Nome not only involved taking over aspects of Min and Montju, hoary denizens of that area, but also the assimilation of popular local animal cults such as the ram and the goose. The secondary nature of Amūn's connection with the former is revealed by the rarity with which we find ram-headed representations of the god (Bonnet, op. cit., p. 33).

οὗτοι ... ὀΐων ἀπεχόμενοι αἶγας ϑύουσι : The worship of the ram in Thebes and other cities would lead to a general taboo on all members of the species as H. indicates here (n. II, 65). In such areas the inhabitants abstained from the flesh of sheep (e.g. the Libyans at Siwa, S.E., *P* III, 24 (223)), while priests were everywhere in later times forbidden to eat it (Plu., op. cit., 5 (*Mor* 352)). Full-scale worship of ewes is doubted by Hopfner (*Tierkult*, p. 97 ff.) and denied by Kees (*Götterglaube*^{2}, p. 73).

Goats were a favourite offering, though they were considered inferior to cattle and antelopes. It was in fact the sacrifice of the ordinary man (Petrie, *Memphis*, V, pl. LXXIX; v. Bissing-Kees, *Re-Heiligtum*, III, p. 54; Kees, *NAWG* 1942, p. 74; id., *Götterglaube*^{2}, l.c.; Bonnet, op. cit., p. 882 ff.).

ὅσοι δὲ τοῦ Μένδητος ἔκτηνται ἱρὸν ἢ νομοῦ τοῦ Μενδησίου εἰσί : On *Μένδης* cf. also n. II, 46. *Μένδης* = the Gk. rendering of the Eg. name *B3-nb-ḏd* "Soul of the Lord of Djedet" *via Bendetis/Bendet* with "b" to "m" as often (Ranke, *APAW* 1910, Anhang, p. 27). A form of Khnum-rēʿ, M. was a god worshipped throughout the country (Plu., op. cit., 73 (*Mor* 380)) but particularly in L. & M. Egypt (Hopfner, op. cit., p. 89 ff.; Bonnet, op. cit., p. 868 ff.). He was, however, honoured above all at Djedet, capital of the 16th Nome of L.E., normally called Mendes by the Gks. (Gauthier, *DG* II, p. 74; Montet, *DG* I, p. 144 ff.; Gardiner, *AEO* II, p. 150* ff.) where, according to Man. Hist., he was introduced in the reign of Kaiechos during the IInd Dyn. (*FgrH* 609, p. 20 ff.). There he supplanted Ḥatmeḥit, ancient mistress of the 16th Nome, and reduced her to a subordinate rôle as his wife (*Urk* II, 32). M.'s earliest name was "Ram of Anep" (Petrie, *Medum*, pl. XXI) and, though attempts were made to anthropomorphize him in the O.K., he never lost his close connection with that animal (Keimer, op. cit., p. 695). The period of M.'s greatest popularity—the XXIXth (Mendesian) Dyn.—was still in the future when H. visited Egypt.

οὗτοι δὲ αἰγῶν ἀπεχόμενοι ὄϊς ϑύουσι : Here and II, 46 the Sacred

Animal of Mendes is understood to be a goat (*αἴξ, τράγος*). Further, the Hellenistic coinage of the Mendesian Nome bears the figure of a goat (Tochon d'Annecy, *Recherches sur les Médailles des Nomes*, p. 162 ff.). It must, however, be emphasized that the goat's connection with Mendes is late and a matter of convenience (vide supra, p. 190). It does not in any way affect the theology and only rarely the iconography of the god who was regarded to the end as a ram (Roeder, *Die ägyptische Götterwelt*, p. 164 with pl. 13 representing a goat with ram's horns!), a situation calculated to cause as much confusion amongst the ancients as it has done to modern scholarship. Hopfner's suggestion (op. cit., p. 89) that the confusion arose from the difference in species between Gk. and Eg. sheep and the goat-like appearance of the latter is unnecessary. Genuine goat cults are known in Egypt but they are small and unimportant e.g. in the Theban Necropolis (Bonnet, *Bilderatlas*, 49; id., op. cit., p. 882).

The Eg. evidence of sheep offering is slight (vide infra) but the practice is not inconceivable. Animal worship in the L.P. shows strange developments (cf. Plu., op. cit., 72 (*Mor* 380)). The use of the goat, even as a substitute at Mendes, may have led to the development of a taboo on it as a sacrificial animal. However, the erstwhile general popularity of the animal for that purpose would demand that a replacement should be found. The obvious candidate would be sheep (cf. generally, though rather obscurely, Kees, *Götterglaube*^{2}, l.c.).

Θηβαῖοι μέν νυν ... ἐν ἱρῆ θήκη : Cf. Hyg., *F* CXCVI. This aetiological myth is most naturally interpreted as an attempt to explain the ritual of sacrifice and fleecing of the *κριός* (II, 42, 6). The *ἐξήγησις* given by the *Θηβαῖοι* will be a secondary development, perhaps even a desperate reply to some insistent and inquisitive Gk. It is best discussed in two parts

1. The custom (42, 6).
2. The explanation (42, 3-4).

1. The custom. There are the following difficulties :

(a) In the light of II, 42, 2 killing and fleecing a ram seems odd.
(b) Who was *Ἡρακλῆς*?

(a) One's immediate reaction to the passage is to assume that H., or his source, is referring, in fact, to a goat sacrifice. This is, however, out of the question :

(1) H. does not regard killing the *κριός* as a sacrifice (*τοὺς δὲ κριοὺς ... ἱροὶ διὰ τοῦτο* (42, 5)).
(2) The *Θηβαῖοι* confirm H.'s account (3-4).
(3) The goat was the sacrifice of the small man (vide supra). It is hardly conceivable that the cult-statue of Theban Amūn would be clad in the fleece from such a sacrifice.

We must, therefore, accept that a *κριός* was actually used for this purpose and there is, in fact, evidence which goes some way towards supporting H.'s story :

1. In describing the clothing rituals carried out on the *Kultbild* the Temple Ritual of Amūn and Mūt reads *sfḫ·n·(ỉ) dḥr ḥr s3 nṯr* "I have loosened the skin behind the god" (Moret, *Le Culte Divin Journalier* p. 42). This is part of the *daily* ritual in the temple.

2. Some gods wear animal skins. The god Bes is frequently dressed in that of a lion (Bonnet, op. cit., p. 102 ff.) and the goddess Sefkhet is represented at Dendera in a panther skin which is described as *msḳ n nhs* "The Skin of the Monster" i.e. Seth. We also find that both Anubis and Osiris have as their emblem a skin tied to a pole (the *'Imy-wt* Fetish, *Wb* I, p. 73, 15).

3. Skins certainly play a rôle in the mortuary cult. In the ritual of embalmment we read "Fine rituals are performed for you and the goodly burial of the hide of Seth, your foe, and your heart is made glad (therewith) in your tomb" (Sauneron, *Rituel de l'Embaumement*, 32, 2-4). Further, the dead must pass through a place called *Msḳt* which may mean "Place of the Skin". In addition, whatever view we take of the purpose of the *Tknw*, it is clear that the object itself is a man in a skin (Bonnet, op. cit., p. 774 ff.).

4. Men are found wearing animal skins in Egypt. Priests wear panther skins (L*D* II, pl. 19, 83, 93, 97 etc.) and statuettes are known which represent human figures wearing ram's head masks (Michaïlidis, *BIFAO* 65 (1967), pl. 2).

5. Ritual slaying of rams is indicated by several facts :

(a) Rams' heads are depicted on altars (Budge, *Eg. Sculptures*, pl. XLI, B.M. no. 616; Legrain, *CGC. Statues*, III, pl. XXIII; Capart, *CdE* 19 (1944), p. 219 ff.).

(b) Poles with rams' heads are represented in Egypt (Legrain, op. cit., II, pl. XIII; Daressy, *ASAE* 20 (1920), p. 8 ff.). Capart (op. cit., p. 220) suggests that it is the head of the ram presented for veneration.

(c) The bones of *Ovidae* have been found in Karnak (Legrain, *RT* 28 (1906), p. 146). These may be the remnants of sacrificed animals carefully guarded in the temple (Sourdille, *Hérodote et la Religion*, p. 161 ff.).

6. There are anthropological parallels (Frazer, *Spirits of the Corn and of the Wild*, II, p. 173). The purpose of such rituals is to impart to the object or person clothed in the skin/fleece the attributes of the animal in question.

This evidence proves three things :

(a) The cult statue of Amūn was clothed with a skin which received attention during the daily ritual.

(b) The function of skins in a variety of contexts was magical and designed either to impart to the wearer the nature of the animal or the nature of the entity symbolized by the animal.

(c) Sheep were slain in Ancient Egypt in ritual contexts. Certainly points 5(b) & (c) are capable of other interpretations but the altars embellished with rams' heads admit of no other explanation.

We conclude, therefore, that H.'s account of the Theban ritual is probably correct and that the purpose in sacrificing the ram and clothing the statue of the god was to endue it with the attributes of the sacred animal. The ritual would thus be analogous to the rites designed to charge the statue with life, though, unlike them, it appears to have been conducted only once a year. (For a different explanation cf. Spiegelberg, *ZÄS* 62 (1927), p. 23 ff.)

(b) *Ἡρακλῆς* was probably Chonsu :

1. *Ἡρακλῆς* was the son of Zeus. At Thebes the divine triad, conceived as father-mother-child, consisted of Amon-rēʿ, Mūt and Chonsu. Therefore, it seems reasonable to suppose that *Ἡρακλῆς* was identical with Chonsu (Bonnet, op. cit., p. 142).

2. Chonsu's name is probably connected with *ḫns* "travel through, wander through" (*Wb* III, p. 299, 5-19). In fact in the L.P. the name was

certainly understood in that way and he was regarded as the Wanderer through the Heavens. This attribute might easily suggest comparison with the most travelled of all Gk. heroes.

3. Chonsu assumed certain of the characteristics of Shu, the Air-god who was imagined to support the sky, a function paralleled by the legend of Herakles and Atlas (cf. L*D* IV, pl. 14; Sethe, *Amun und die acht Urgötter*, p. 30 ff.; Bonnet, op. cit., p. 142).

For a similar view vide Sethe, l.c.; Milne, *HERE* VI, p. 382; Gwyn Griffiths, *JHS* 75 (1955), p. 23; Michaïlidis, *BIFAO* 65 (1967), p. 25 ff.

Is it not possible that H. is referring to the preliminaries of the Festival of Opet? The first important ritual involved the king in making offerings to Amūn in his shrine before which stood the divine barks of Mut, Chonsu and the King (Wolf, *Das schöne Fest*; Vandier, *La Religion*^{2}, p. 189 ff.). Might not the bark of Chonsu have been brought in solemn procession from one of his shrines in Thebes? H. certainly connects the ritual with a *ὁρτῇ τοῦ Διός* and that of Opet was the most important of all, beginning on the 19th of the 2nd month of the Inundation and lasting between 24 and 27 days. If the Gks knew of any festival at Thebes, we should expect it to be this one. Be that as it may, visits of one god to another were very common (Sourdille, l.c.; Bonnet, op. cit., p. 610 ff.). Amongst those known is the visit of Amūn to his son Chonsu (*BAR* IV, § 611)!

ἀπὸ τούτου κριοπρόσωπον τοῦ Διὸς τὤγαλμα ποιεῦσι Αἰγύπτιοι : Amon-rēʿ is often represented as a man with a ram's head and descriptions like *κερασφόρος*, *κερατοφόρος*, *corniger*, *arietinis cornibus*, *κριοπρόσωπος*, *κριοκέφαλος* are common in classical writers. As the son of Amon-rēʿ Alexander the Great is often depicted with horns (e.g. Svoronos, *Τὰ Νομίσματα τοῦ Κράτους τῶν Πτολεμαίων*, pl. 1). Statues show the same characteristics (Spiegelberg, *ZÄS* 54 (1918), p. 74 ff.; Daressy, *CGC. Statues de Divinités*, pl. XXIX).

ἀπὸ δὲ Αἰγυπτίων 'Αμμώνιοι : I, 46, 3; II, 18, 2 ff.; 55; III, 25, 3; IV, 181, 2. *'Αμμώνιοι* = the inhabitants of the Oasis of Siwa, the site of the world famous oracle of Zeus Ammon, the earliest refs. to which occur in Pi. It was much favoured in Sparta in the 5th Century (Plu., *Lys* 20;

D.S., XIV, 13, 5). We are also told that Cimon consulted it (Plu., *Cim* 18) as well as Nicias before the Sicilian Expedition (id., *Nic* 13, 1). The enthusiasm for Ammon at Cyrene where his head occurs on coins c. 500 B.C. (Robinson, *Cat.Gk.Coins Cyrenaica*, p. CCXXXIV; Head, *Hist. Num.*, p. 865 ff.; Cook, *Zeus*, I, pp. 351 with n. 1, 371 with n. 2), H. II, 32 and the fact that Pi. wrote the poems mentioned above for Cyrenaeans (*P* IV, 14 ff.; cf. Paus., IX, 16, 1), suggest that Cyrene was the source of much of H.'s material on Siwa (Classen, *Historia* 8 (1959), p. 349 ff.; id., *Artemis Lexikon*, 139; Nilsson, *GgrR* I, p. 832; Sontheimer, *KP* I, 304; Parke, *The Oracles of Zeus*, p. 202 ff.). The origins of this cult are debatable. The evidence stands as follows :

(a) There are several factors in favour of an Ethiopian origin :

1. The Ethiopians were particularly enthusiastic Amūn-worshippers (n. II, 29, 7).

2. There is clear proof of Ethiopian expansion into the Libyan Oasis area during the reign of Taharqa (689-664) (Lepsius, *ZÄS* 15 (1877), p. 16 ff.; Steindorff, *Durch die Libysche Wüste*, p. 69 ff.; id., *ZÄS* 69 (1933), p. 22 ff.; Leclant-Yoyotte, *BIFAO* 51 (1952), p. 28, n. 6).

3. Ethiopian interest is at the least indicated by the fact that Tanutamon consulted the oracle (Polyaen., *Strat* VII, 3; cf. Mallet, *Les Premiers Établissements*, p. 46, n. 1).

4. There is evidence of the Nubian god Dedun at Siwa (Fakhri, *Siwa*, p. 83).

(b) The following factors favour an Eg. origin :

1. Eg. contacts are known from N.K. onwards. Eg. evidence suggests a suzerainty over the oasis in the XVIIIth Dyn. (Davies, *Puyemrê*,I, pl. XXXI, XXXIII; Newberry, *Rekhmara*, pl. XIII). The discovery of a temple of Ramesses II W. of Mersah Matruh, on the old road to Siwa, suggests close bonds between Eg. & Siwa in the XIXth Dyn. (Helck-Otto, *Kleines Wörterbuch*², p. 256 ff.). It is probable that under the Libyan Pharaohs of the XXIInd Dyn. the area was thoroughly under Eg. control (Gardiner, *JEA* 19 (1933), p. 19 ff.; Fakhri, *Baḥria*, I, p. 19 ff.; id., *Siwa*, p. 25). However, certain archaeological evidence of Eg. activity on the site only begins in the XXVIth Dyn. when Amasis

built a temple there in honour of Amūn (Fakhri, *Siwa*, p. 28).

2. The method of delivering the oracular response both in Thebes and in Siwa was the same (Fakhri, op. cit., p. 41; Bonnet, op. cit., p. 25).
3. Representations of Amon-rēʿ with a ram's head occur in the Temple of the Oracle at Aghurmi (Fakhri, op. cit., pp. 93, 111, 113). Statues with the same characteristics are also known (Pietschmann, *RE* I, 1858 ff.).

(c) The following factors favour a Phoenician origin :

1. The god is usually named "Ammon", thereby differing from the Theban Amūn. Eissfeldt (*FuF* 12 (1936), p. 408; *Ras Schamra*, pp. 16 ff., 36 ff.) suggested that "Ammon" reflects the influence of the Phoenician Baʿal Ḥamman (בעלחמן) who is known from Sam'al (Pritchard, *ANET* p. 501, l. 14) and became the chief god of Carthage and Punic N. Africa where thousands of votive stelae in his honour have been found. Baʿal Ḥamman was a god of fertility (*Hos* 2, 8 ff.; Toutain, *Cultes*, III, p. 15 ff.; Gesenius, *Script. Ling. Phoen. Mon.*, p. 170 ff.; Paton, *HERE* II, p. 286 ff.; Meyer, ap Roscher, *ML* I, 2867 ff.; Cumont, *RE* VII, 2310 ff.; Fauth, *KP* I, 791 ff.; Charles-Picard, *Rel. de l'Afrique Antique*, p. 56 ff.).

2. Sacred stones (Heb. מַצֵּבוֹת *măççēbhôth*) were commonly worshipped amongst the Semites (vide n. II, 44). In fact the name Baʿal Ḥamman probably means "Lord of the Pillars" (cf. Heb. חַמָּנִים *Ḥămmānîm* Meyer, op. cit., 2870; Cumont, op. cit., 2310; Paton, op. cit., p. 287 ff.; Ingholt, *Mél.R.Dussaud* 2 (1939), p. 795 ff.; Starcky, *Syria* 26 (1949), p. 51 ff.). This suggests connections with the *umbilicus* which was an important cult object of Zeus Ammon (Curt., IV, 7, 23).

3. Baʿal Ḥamman is frequently represented with ram's horns sitting on a throne supported by rams (Perrot-Chipiez, *H. de l'Art*, III, p. 73).

4. In classical times Zeus Ammon was clearly identified with Zeus/Juppiter Hammon (*CIL* VIII, 9018; Bücheler, *Carm. Lat. Ep.*, 253; Manni, *Ath* 16 (1938), p. 228 ff.; Ferron, *Byrsa* 3 (1953), pp. 113 ff. with pl. I).

(d) Affinities with Libyan cults are suggested by the fact that the shrine of Zeus Ammon is often mentioned in connection with the Fountain of the Sun (cf. H., IV, 181; Lucr., VI, 848 ff.). At Siwa today and in other parts of Libya wells are regarded as inhabited by spirits or *ginns* (Bates, *The Eastern Libyans*, p. 172 ff.).

(e) Finally it should be observed that the Temple of Aghurmi, the earliest and most important shrine of Amūn at Siwa, is neither Eg. nor Gk. in character (Ricke, *ZÄS* 69 (1933), p. 12).

This evidence can best be interpreted in the following way. Oases are areas of fertility and sources of water in desert-lands. One would, therefore, expect them to be regarded as the abodes of fertility gods from time immemorial. An ancient Libyan god may, therefore, be assumed, despite the lack of documentary or archaeological evidence and may be indicated by (d). The Phoenician elements are clear and undeniable. They will have arrived during or after the 9th Century (Introduction, p. 11), and the early Libyan fertility water-sprite was then given a thick Phoenician veneer from a related god. The connection of Baʿalim with subterranean water may well have been particularly important here (cf. Smith, *The Religion of the Semites*, p. 96 ff.; id., *Historical Geography of the Holy Land*, p. 305). (b) leaves no room for doubt that Eg. interest in the area goes back to the N.K. but the archaeological record suggests that the importation of the cult of Amūn on any scale probably belongs about the middle of the 6th Century B.C. This will have arisen not only because of the extension of Theban temple domains into the area but also because the connection of Baʿal Ḥamman with the ram suggested Amūn as an obvious Eg. counterpart.

Αἰγυπτίων τε καὶ Αἰθιόπων ἄποικοι : The oases have at all periods been racial melting-pots, largely because of the use of the line of oases to the W. of Egypt as a travel route from the S. between the Sahara proper and Egypt (Kees, *Ancient Egypt*, pp. 23, 129, 133). Today the inhabitants of Siwa are a mixture of Berber, Beduin and Sudanese stock (Fakhri, op. cit., p. 1).

Eg. settlers in Siwa are likely :

1. The Egs. used the oasis area from an early period as a place of banishment for criminals (Brugsch, *Recueil de Monuments*, I, pl. XXII, p. 39 ff.; id., *Reise nach der Grossen Oase*, pl. XXII; *BAR* IV, §§ 650-658; Fakhri, op. cit., p. 41).

2. The thoroughgoing Egyptianization of burials (Fakhri, op. cit., p. 121 ff.) and Siwan religion (vide supra) can only be explained by the presence of Egs. at Siwa for some time.

The number of Egs. was, however, small; for Derry's research on crania of the Ptol. and Roman Period from the area enabled him to claim that they were not Eg. (*Varia Africana* IV. *Harvard Af. Studies* 8 (1927), p. 201 ff.), a statement too dogmatic but indicative of the general trend.

Ethiopians in Siwa are equally likely (vide supra). It is, however, out of the question that Egs. and Ethiopians were the only settlers. Native Libyans there must have been. The early inhabitants of Libya, the *Ṯḥnw*, were ethnically very similar to the Ancient Egs. (n. II, 18; Fecht, *ZDMG* 106 (1956), p. 37 ff.). The area was later inhabited by the *Ṯmḥw* who had pushed in from the S. (Fakhri, op. cit., p. 22; id., *Baḥria*, I, p. 5; Gardiner, *AEO* I, p. 116* ff.; Hölscher, *Libyer und Ägypter*, p. 49 ff.) and later still by the *Mšwš* (Gardiner, *JEA* 19 (1933), p. 19 ff.; id., *AEO* I, p. 120*).

φωνὴν μεταξὺ ἀμφοτέρων νομίζοντες : i.e. partly Ethiopian, partly Eg. The Gks. were bad linguists and even worse philologists but there is much to be said in H.'s favour :

1. The Ethiopian language in question was presumably that of traders from the Cushitic Kingdom to the S. That being so, it may have been Meroitic, the linguistic affinities of which are as yet unknown, or even an Hamitic tongue spoken to the S. of Egypt such as Nubian (cf. Shinnie, *Meroe*, p. 132 ff.). It is probable that, whatever language was involved, it had been contaminated by Eg. elements during the long Eg. domination S. of the First Cataract (cf. the effects of Arabic on Nubian, Armbruster, *Dongolese Nubian. A Grammar*, p. 13 ff.).

2. The inscriptional material from Siwa makes it quite clear that Eg. was understood there (Fakhri, op. cit., p. 69 ff.). The extent of its use cannot, however, be determined.

3. It should further be borne in mind that today the inhabitants of Siwa speak a Berber dialect belonging to the Hamitic stock which forms the basis of Ancient Eg. (Gsell, *L'Afrique du Nord*, I, p. 309 ff.; Fakhri, op. cit., p. 2; Basset, *Le Dialecte de Syouah*; Gardiner, *Egyptian Grammar*^{3}, p. 2, § 3; Lefebvre, *CdE* 11 (1936), p. 266 ff.; id., *Grammaire de l'Égyptien*

Classique, p. 1 ff.; Zyhlarz, *Ursprung und Sprachcharakter des Altägyptischen*, passim; Drioton-Vandier, *L'Égypte*⁴, p. 5 ff.; Janssens, *CdE* 42 (1967), p. 86 ff.) and there can be no reasonable doubt that their Libyan ancestors also spoke such a dialect (Gsell, op. cit., p. 314; Gardiner, *AEO* I, p. 121*; Bates, *The Eastern Libyans*, p. 73 ff.).

Such a complex linguistic picture makes H.'s statement easily intelligible. In any case the growth of a *lingua franca* in this frontier area made up of Ethiopian, Eg. and Libyan dialects would be a perfectly natural phenomenon.

'Αμοῦν γὰρ Αἰγύπτιοι καλέουσι τὸν Δία : *'Αμοῦν* Eg. *'Imn*, probably "The Hidden One" (*Wb* I, p. 83 ff.); Heb. אָמוֹן *'Āmôn* (*Jer* 46, 25; *Nahum* 3, 8); Middle Babylonian *Aman*; Assyrian/Late Babylonian *Amun*; Copt. ⲁⲙⲟⲩⲛ (Ranke, *APAW* 1910, Anhang, p. 44). Observe that *'Imnt*, Amūn's old female counterpart in the Hermopolitan Ogdoad, emerged in Gk. as *'Αμαῦνι* (*Wb* I, p. 85, 3). H.'s Gk. rendering is, therefore, very accurate.

ταῦτα δὲ ποιήσαντες τύπτονται ... τὸν κριόν : Cf. H., II, 40, 4; 61; Lucianus, *Sacr* 15.

ἔπειτα ἐν ἱρῇ θήκῃ θάπτουσι αὐτόν : Cf. in general n. II, 65. Mummies of sacred rams have been found at Thebes (Hopfner, op. cit., p. 97) and Elephantine (l.c.), and the coffins thereof at Thmuis/Mendes (Naville, *Ahnas el Medineh*, p. 15 ff.; Scharff, *MDAI(K)* 1 (1930), p. 132; *PM* IV, p. 36). They were often buried very sumptuously, those found at Elephantine even being embellished with golden masks. There is, however, no record of any mummy showing traces of the treatment described by H. (cf. Gaillard-Daressy, *La Faune Momifiée*, Index III, s.v. Ovidés; Lortet-Gaillard, *La Faune Momifiée*, p. 87 ff.), though it is possible that the jars with ram's-head tops carried by royal sphinxes (cf. Legrain, *CGC. Statues*, II, pl. VIII; III, pl. IX), together with a similar jar found at El Kab, were the depositories of the dead animals' remains (Capart, op. cit., p. 220).

43-5 Digression on Herakles inspired by II, 42 and inserted in the framework of H.'s discussion of Eg. ram cults. The entire excursus is of great interest in revealing H.'s methods. We have clear cases of the application of *γνώμη* (43, 4; Introduction, p. 86 ff.) as well as of *ἱστορίη* (44, 5; Introduction, p. 88 ff.). We have also a good example of Herodotean rationalism in Ch. 43 & 44 which cohere as a formal demonstration that the Gk. Herakles derived his name from an Eg. prototype. It has its antecedents in Hec., strangely enough in connection with Herakles (*FgrH* I, F. 26-7), and parallels in Th. (I, 2 ff.; II, 15 ff. etc.). Traditions are subjected to a strict *Prüfung* and their significance established by means of *τεκμήρια* ("positive proofs") or *σημεῖα* ('indications", "pointers"). The argument takes the following form :

1. Proposition. The name "Herakles" came from Egypt.
2. Argument. The *τεκμήρια* used are :

(a) Amphitryon and Alcmene had Eg. ancestors (43, 2).
(b) When maritime relations exist between states, one would expect any religious borrowings between them to involve sea-gods. The sea-gods Poseidon and the Dioscuri were unknown to the Egs. Therefore, they had made no religious borrowings from the Gks. (43, 2-3).
(c) The Eg. god was very ancient (43, 4).
(d) Tyrian priests speak of the foundation of a temple of Herakles c. 2700 B.C. (44, 3).
(e) The Thasian temple of Herakles dates 5 generations before the birth of Herakles, son of Amphitryon (44, 4).

Of these *τεκμήρια* four are, in rhetorical terms, *πίστεις ἄτεχνοι*—(a) is based on additional evidence within the Herakles-tradition; (c) is based on Eg. tradition, (d) consists of the evidence of witnesses and (e) is based on the chronology of the Cadmus tradition. (b), however, is an *enthymeme* and constitutes a *πίστις ἔντεχνος*.

43. Ἡρακλέος δὲ πέρι ... τῶν δυώδεκα ϑεῶν : The identity of this god has caused difficulty. H. gives the following information :

1. The god in question is an *ἀρχαῖος θεός* of the Egs. (43, 4).
2. He is one of the Twelve Gods.
3. The Twelve Gods derive from the Eight Gods.
4. The Twelve Gods came into being c. 17, 500 B.C.

There can be no doubt that H. is referring to the Dynasties of the

Gods (cf. Introduction, p. 186; n. II, 144). The Eight Gods will be the Hermopolitan Ogdoad who were the denizens of the Nūn, the Primeval Waters of Chaos. 4 were male, 4 female and they personified the fructifying, life-giving power instinct in the Nūn. It was they who created the sun-god (Sethe, *Amun und die acht Urgötter*, §§ 65, 154; Roeder, *ZÄS* 67 (1931), p. 22 ff.; id., *Egyptian Religion* 1 (1933), p. 1 ff.; Jéquier, ib. 2 (1934), p. 77 ff.; Erman, *Die Religion*, p. 94 ff.; Vandier, *La Religion Égyptienne*², p. 33 ff.; Bonnet, *RÄRG* p. 5 ff.; Gwyn Griffiths, *JHS* 75 (1955), p. 21 ff.; Morenz, *Ägyptische Religion*, Index, s.v. Achtheit).

H.'s Twelve Gods, as such, make no sense in Eg. Theology. The body created by the Ogdoad was the Ennead i.e. the Nine Gods listed in the Heliopolitan scheme as Rēʿ-Atūm, Geb, Shu, Tefnut, Nut, Osiris, Isis, Nephthys and Seth. It was, however, possible to extend this number while still retaining the name Ennead (e.g. *PT* 1660). Consequently, H. is probably basing his statement on an Ennead consisting of Twelve Gods which he had encountered. He cleaves to the *fact* rather than strict theology (cf. n. II, 41), a phenomenon in this case all the more comprehensible in view of the importance of the canonical list of Twelve Gods in Greece, many of whose members were identified with members of the Heliopolitan Ennead (Sethe, op. cit., § 112 ff.; Erman, op. cit., p. 358 ff.; Vandier, op. cit., p. 32; Bonnet, op. cit., p. 521 ff.; Gwyn Griffiths, op. cit., p. 22). For the Twelve Gods in Greece cf. Weinreich ap Roscher, *ML* VI, 764 ff.; Preller-Robert, *GrM* I, p. 106 ff., particularly p. 109 ff.; Wilamowitz, *Der Glaube*, I, p. 322 ff.; Kern, *Die Religion*, I, pp. 132, 203, 252; II, p. 50; III, p. 50; Guthrie, *The Greeks and their Gods*, p. 110 ff.).

Thus, H.'s statement implies that his *Ἡρακλῆς* is a member of the Heliopolitan Ennead i.e. is either Rēʿ, Geb, Shu, Osiris or Seth. Neither Rēʿ, the sun-god, Geb the earth, Osiris the dying god, ruler of the dead, nor Seth the arch-fiend seem apt counterparts of Herakles. Shu, on the other hand, does, not only because he was the supporter of heaven and, as such, would recall the legend of Herakles and Atlas (vide n. II, 42) but also because he was a doughty warrior (Gwyn Griffiths, op. cit., p. 23).

We conclude, therefore, that H. is here referring to Shu. It should, however, be remembered that the contradiction with II, 42, 3 is only apparent; for though Herakles is there undoubtedly identified with Chonsu (see note), the frequent assimilation of Chonsu to Shu makes the use of one Gk. god or hero to cover both Eg. gods perfectly natural.

τοῦ ἑτέρου δὲ πέρι Ἡρακλέος ... οὐδαμῇ Αἰγύπτου ἐδυνάσθην ἀκοῦσαι : H. here reflects the distinction between Herakles the God and Herakles the Hero (cf. Pi., *N* III, 22). He is very much in the minority in arguing that the divine nature of Herakles preceded the heroic (Farnell, *GHC* p. 98; Pötscher, *KP* II, 1049 ff.; for the standard view cf. *Od* XI, 601; Hes., *Th* 950; Paus., II, 10, 1; Arr., *An* IV, 11, 7), a position which he reaches through asserting that the two figures are quite different. The evidence proves that H. is wrong and that Herakles is a unique example of a hero raised to the rank of an Olympian god (Farnell, op. cit., p. 97 ff.; Nilsson, *The Mycenaean Origins*, p. 187 ff.).

παρ' Αἰγυπτίων καὶ Ἑλλήνων οὗτοι οἱ θέμενοι τῷ Ἀμφιτρύωνος γόνῳ τοὔνομα Ἡρακλέα : The name is Gk. and almost certainly = *Ἥρα* + *κλέος* despite the short *α* (Kretschmer, *Glotta* 8 (1917), p. 121 ff.; Farnell, op. cit., p. 99 ff.; Wilamowitz, op. cit., II, p. 20; Pötscher, *KP* II, 1049 ff.; cf., however, Zwicker, *RE* VIII, 524 ff.; Schmoll, *Artemis Lexikon*, 1258).

Ἀμφιτρύων καὶ Ἀλκμήνη γεγονότες τὸ ἀνέκαθεν ἀπ' Αἰγύπτου : The mother of Herakles is always Alcmene (cf. de Franciscis, *EAA* I, p. 200) but there are differences of opinion on his father even in the earliest extant records. Hom. regards him both as the son of Zeus (*Il* XIX, 98 ff.) and the son of Amphitryon (*Il* V, 392). This vacillation doubtless reflects the oscillation between Herakles the God and Herakles the Hero.

Both Amphitryon and Alcmene were descendants of Perseus, hence *γεγονότες τὸ ἀν. ἀπ' Αἰγύπτου* (vide n. II, 91, 5).

τὸ οὔνομα : What does this mean? There are two suggestions current:

(a) *τὸ οὔνομα* means "name" :

(1) *ἐπωνυμίην δὲ οὐδ' οὔνομα ἐποιεῦντο οὐδενὶ αὐτῶν· οὐ γὰρ ἀκηκόεσάν κω* (II, 52, 1) only makes sense if we understand *οὔνομα* as "name".

(2) *ἀνεῖλε τὸ μαντήιον χρᾶσθαι* (II, 52, 3) is a natural expression if *οὔνομα* = "name", strange if it means "nature".

(3) *καὶ μὲν ὅτι γε οὐ παρ' Ἑλλήνων ἔλαβον τὸ οὔνομα Αἰγύπτιοι, ἀλλ' Ἕλληνες μᾶλλον παρ' Αἰγυπτίων καὶ Ἑλλήνων οὗτοι οἱ

θέμενοι τῷ Ἀμφιτρύωνος γόνῳ τοὔνομα Ἡρακλέα (II, 43, 2) is incomprehensible unless οὔνομα means "name".

(4) οὔνομα may mean "name + personality" but it must mean *at least* "name" (*LSJ* p. 1232; Powell, *Lexicon*, p. 278, s.v. οὔνομα).

So Meyer, *Forschungen*, I, p. 194; Diels, *Neue Jahrbücher* 25 (1910), p. 16; Lattimore, *CPh* 34 (1939), p. 357 ff.

(b) τὸ οὔνομα means "personality" i.e. it was not the appellation but "der Begriff der betreffenden Gottheit" which the Gks. took over from Egypt. This view is based on the claim that H. could not have been unaware that the Gk. names which he gives to foreign gods throughout his work are substitutes for foreign names (so Stein, *Herodotos*, II, p. 62 ff.; Rawlinson, *Herodotus*, II, p. 92 ff.; Wiedemann, *Kommentar*, p. 230; How-Wells, *Commentary*, I, p. 191; Linforth, *UCPCPh* 7(9) (1924), p. 285; ib. 9(1) (1926), p. 1 ff.; id., *CPh* 35 (1940), p. 300 ff.; Hemberg, *Die Kabiren*, p. 75; Parke, *Oracles of Zeus*, p. 57).

The case for (a) seems much the stronger to the present writer. Arguments (a) 1 and 2 are not perhaps conclusive but 3 and 4 surely are. Such a view does, of course, commit us to the conclusion that H. actually believed that the Egs. worshipped a god whom they called Herakles and argument (b) does not disprove this. Gks. had been coming to Egypt for two hundred years when H. visited the country. The original visitors may well have been aware that Helios was really called Rēʿ but in two hundred years the name had ample time to stick so closely to the god that some, if not all, Gks. might have thought that the name of Rēʿ *was* Helios. This error could then have been passed on by H.'s Gk. informants. The Egs., for their part,—dragomans or others—would probably have used the Gk. name without bothering to translate when dealing with Gks. H.'s general experience of Eg. Religion could then have presented him with an array of Eg. deities with Gk. or Hellenized names and he might well have developed the unshakeable conviction that Gk. divine names came, by and large, from Egypt. Certainly, he knew what are to us the Eg. *and* Gk. names for some Eg. deities e.g. Amūn (cf. II, 42, 5) but cases like this may be explained in a number of ways. Thus, one might argue that he had heard the god named "Amūn" by some Egs. and, in the light of the conviction described above, either interpreted the name "Amūn" as one employed along with Zeus or assumed that "Zeus" had fallen into abeyance in Egypt since the Gks. had adopted it. However, whatever the explanation of such occasional anomalies may be, there is too much inconsistency, not to speak of carelessness, in H., for us to be obliged to fly full in the face of lexicography and common sense to extricate ourselves from any single problem.

44. ἐς Τύρον τῆς Φοινίκης πυνθανόμενος αὐτόθι εἶναι ἱρὸν Ἡρακλέος ἅγιον : The Phoenician god in question is Melqart (מלקרת *CIS* I, 16, 23-26; 88; 102a & b; 122; Schröder, *Phönik. Sprache*, p. 274, doubtless Melechqart "King of the City" and a form of מֹלֶך (Meyer ap Roscher, *ML* II, 2650). He was also called בעלצור *Ba'al Çôr* "Lord of Tyre"). Melqart is a relatively late phenomenon who appears with the beginning of Phoenician maritime expansion, the first mention being in an inscription of c. the second half of the 9th Century B.C. (Albright, *BASOR* 87 (1942), p. 23 ff.; Dunand, *Bulletin du Musée de Beyrouth* 3 (1939), p. 65 ff.). He was a fusion of two earlier deities Ba'al (Ḥadad) and Yam "the Sea" (Dussaud, *CRAI* 1947, p. 215 ff.; Dhorme-Dussaud, *Les Anciennes Religions Orientales*, II, p. 366) and as such functions both as a dying god of vegetation (Menander, *FgrH* 783, F. 1; Ath., IX, 47 (392d-e)) and as a sea god though the latter became the predominant aspect in later times (Nonn., *D* XL, 428 ff.; *Ins. de Délos*, 1519, l. 14-16; Dussaud, *Syria* 25 (1946-48), pp. 206, fig. 1, 218, fig. 3). His cult is found in several areas colonized by the Phoenicians e.g. E. Cyprus (*CIS* I, 23, p. 51 ff.; Myres, *Cesnola Collection*, p. 170 ff.; Dussaud, op. cit., p. 216 ff.), Sardinia (Chiappisi, *Il Melqart di Sciacca e la Questione fenicia in Sicilia*), Carthage (Donner-Röllig, *Kanaanäische und aramäische Inschriften*, 86) and Gades where the cult enjoyed particular celebrity (Str., III, 5, 3 (C169) ff.; Paus., X, 4, 6; Sil., III, 14 ff.; Philostr., *VA* V, 4 ff.; Schulten, *Arch. Anz.* 1922, 41 ff.; ib. 1927, 204 ff.; Hübner, *RE* VII, 448 ff.).

Archaeological evidence suggests very strongly that the Tyrian temple mentioned by H. stood on the site of the mod. Cathédrale des Croisés (Chéhab, *Mélanges Mouterde*, II, p. 17). It probably consisted of a court surrounded by an *enceinte* in the centre of which stood the cult objects viz. the sacred pillars (vide infra), an olive tree and a sacred fire (Will, *Berytus* 10 (1950), p. 1 ff.; Dussaud, *RHR* 151 (1957), p. 3). That they were enclosed in a roofed shrine is suggested by Menander (l.c.) and by analogies at Ras Shamra and Sidon. In front of the cult objects there will have been an altar (Contenau, *La Civilisation Phénicienne*, p. 162 ff.; Dhorme-Dussaud, op. cit., p. 382 ff.). It should be remembered in this context that the architecture of this temple probably owed much to Eg. models (Contenau, op. cit., p. 163).

καὶ εἶδον πλουσίως κατεσκευασμένον ... τὰς νύκτας μέγαθος : Cf. Thphr., *Lap* IV, 25; Plin., *HN* XXXVII, 75; Ph. Bybl., *FgrH* 790, F.2, 10; Chéhab, *Berytus* 1 (1934), p. 44 ff. It is quite clear that H. is simply describing what he found to be the most impressive items in the temple. Sacred stones are common phenomena in Semitic Religion and Melqart himself was originally represented as a pillar (מַצֵּבָה *măççēbhâ*) in which he was imagined to reside (hence בֵּיתאֵל *Bêth 'ēl* Gk. *βαίτυλος* "Dwelling of God"; Seyrig, *The Excavations at Dura-Europos. Prel. Rep.* IV, p. 70; Dussaud, *RHR* 151 (1957), p. 9 ff.; du Mesnil du Buisson, *RHR* 164 (1963), p. 133 ff.). At Tyre the stones are represented as round-topped and standing on a rectangular base. On coins they are described as *ΑΜΒΡΟΣΙΕ ΠΕΤΡΕ* "Divine Stones" (du Mesnil du Buisson, l.c.). The dual character of the pillars (cf. the two bilingual *cippi* from Malta (*CIS* I, 122); coins (Babelon, *Les Perses Achéménides*, p. CXCIV; pl. XXXVI, 16; XXXVII, 11 & 16; XXXVIII, 7-8, 23-5); the two brazen pillars which Hiram persuaded Solomon to erect in the temple (I *Kings* 7, 15); the Pillars of Herakles, originally the two bronze stelae in the Temple of Melqart near Gades (Schulten, ap Jessen, *Die Strasse von Gibraltar*, p. 174 ff.)) doubtless reflects the fusion of the two gods in Melqart (vide supra); for Ph. Bybl. (l.c.) connects them with fire and wind i.e. Ba'al and Yam.

ἐς λόγους δὲ ἐλθὼν ... τριηκόσια καὶ δισχίλια : i.e. c. 2750 B.C. Menander (*FgrH* 783, F.1) speaks of the reconstruction of the temple of Herakles in the reign of Hiram of Tyre (969-936 B.C.). Strictly neither he nor H. is correct; for the cult of Melqart as such does not occur before the 10th Century when Hiram may well have constructed an elaborate temple in his honour (cf. Launey, *Le Sanctuaire et le Culte d'Héraklès à Thasos*, p. 192 ff.). The old temple which he pulled down and which H.

mentions as existing in the 3rd Millennium will be a shrine of Baʿal Ḥadad whom Melqart had assimilated (Dussaud, *Syria* 25 (1946-48), p. 208).

The date of the κτίσις of Tyre is a problem. There is the following evidence :

1. J. (*AJ* VIII, 3, 1) places it 240 years before the foundation of Solomon's Temple.
2. Just. (XVIII, 3) places it one year before the sack of Troy.
3. Byblos certainly existed by 3000 B.C. (Harden, *The Phoenicians*, p. 221, n. 24).
4. The name of Tyre occurs in the Amarna letters (Knudtzon, *Die El-Amarna Tafeln*, II, Eigennamenverzeichnis, s.v. alu surri; Harden, l.c.) and also in P. Anastasi I (Gauthier, *DG* VI, p. 106 ff.).

The Eg. material proves that Tyre existed in the 14th Century while point 3 proves that what was later a Phoenician settlement existed at the beginning of the 4th Millennium. These facts, together with the priestly nature of H.'s source, suggests that H.'s statement is not far from the truth. We must interpret the tradition of a κτίσις in the 12th Century as referring to a re-foundation; for Tyre was certainly destroyed by the Sea Peoples towards the end of the 2nd Millennium to be rebuilt as a Sidonian town (Meyer, *GdA* II, 2, p. 79 ff.; Albright, *CAH* II, Ch. XXXIII, fasc. 51, pp. 36, 39; Harden, l.c.).

εἶδον δὲ ἐν τῇ Τύρῳ ... εἶναι : A shrine of the Thasian Herakles in Tyre will be the result of Thasian commerce (cf. Apollo Milesius at Naucratis; Picard, *BCH* 47 (1923), p. 264; Kruse, *RE* V, 2 1309; Launey, op. cit., p. 224). Thasian trade with Phoenicia is probable for several reasons :

1. Thasian coins from the end of the 6th Century-beginning of the 5th occur in the Syria-Lebanon area with some frequency (Pouilloux, *L'Histoire et les Cultes de Thasos*, I, p. 54).
2. Commercial relations between the Thraco-Macedonian area and Phoenicia are indicated by the Ras Shamra hoard (c. end of the 6th Century B.C.; Schaeffer, *Mélanges syriens offerts à M.R. Dussaud*, p. 461; id., *Syria* 28 (1951), p. 19; Pouilloux, op. cit., p. 21).
3. Thasian activity in Egypt is beyond doubt (Regling, *ZfN* 37 (1927), p. 1 ff.; Robinson, *NCh* 10 (1930), p. 93 ff.) and Phoenicia lay *en route*.

Pouilloux suggests that the cult was established in Tyre because of resemblances observed between Herakles and Melqart (op. cit., p. 356 ff.). This may be so but is not a necessary assumption; for the analogy of Naucratis shows that a Gk. state with considerable interests in a foreign city would establish a shrine of its major god in order to serve the religious needs of its citizens without any reference to native cults. Dussaud's doubts on the existence of this temple are surely unacceptable (*Syria* 25 (1946-8), p. 218, n. 4).

For the *ἐπωνυμίη Θάσιος* cf. *IG* XII, Supp. 414 (c. 470); Paus. VI, 11, 2. The use of the title at Thasos in *IG* is odd. The explanation will be that such names were given by foreigners and then became fixed epithets e.g. Artemis Ephesia and Aphrodite Paphia. In this case the name probably grew up in the Thracian *περαία* (Seyfrig, *BCH* 51 (1927), p. 369 ff.; Launey, op. cit., p. 137). For reps. of the Thasian Herakles cf. Launey, op. cit., p. 139 ff.

ἀπικόμην δὲ καὶ ἐς Θάσον ... τὸν Ἀμφιτρύωνος Ἡρακλέα ἐν τῇ Ἑλ. γενέσθαι : The Thasian cult of Herakles was famed throughout the Gk. world. The Herakleion was situated in the S.W. part of the old town (Launey, op. cit., passim). H.'s statement that it was founded by the Phoenicians raises two questions :

(I) The nature of the statement implies that Herakles was there regarded as a god (Launey, op. cit., p. 130 ff.; Pouilloux, op. cit., p. 352). The evidence suggests both a divine and hero cult :

1. Divine cult :

(a) Paus. (V, 25, 12) knew of the erstwhile existence of such a cult though he speaks of it as being defunct in his own time.
(b) The Prytany regulations (*IG* XII, Supp. 414) suggest that a divine cult existed in addition to a hero cult (Seyfrig, op. cit., p. 197; Launey, op. cit., p. 137 ff.; Pouilloux, l.c.).
(c) *IG* XII, Supp. 353 suggests a divine cult (Launey, op. cit., p. 130; id., *BCH* 61 (1937), p. 380 ff.; Pouilloux, op. cit., p. 352, n. 2).
(d) There was a monumental altar suitable for a divine cult (Pouilloux, l.c.).

2. Hero cult :

(a) Literary evidence is quite explicit on the matter (Archil., F. 118 (Bergk); Paus., l.c.).

(b) Dedicatory inscriptions to Ἡρακλῆς Καλλίνικος, i.e. the hero, occur (Launey, op. cit., Ch. X, Ins. 6, 10, 11).

(c) The cult. Holocausts were a feature of one of the cults at Thasos and these are characteristic of hero-worship (*IG* XII, Supp. 414 with Launey, op. cit., p. 131). The Herakleion also contained a βόθρος suitable for heroic ἐναγίσματα (Launey, op. cit., p. 180 ff.; Pouilloux, op. cit., p. 352; Nock, *AJA* 52 (1948), p. 299).

(d) Herakles is often represented at Thasos as a warrior in the typical guise of a Gk. hero (cf. Launey, op. cit., pp. 140, fig. 78; 142, fig. 79).

(II) The Phoenician legacy. H. states that the establishment of the cult was connected with the wanderings of Phoenicians i.e. Cadmus (on which see n. II, 49, 3) at a date which we should describe as c. 1480 B.C. (Introduction, p. 179) and the Phoenician-origin hypothesis has had its adherents since antiquity. It is, however, in the highest degree unlikely :

1. There is a total lack of evidence for Phoenician expansion in the middle of the 2nd Millennium, the date demanded by H. Indeed, even in Cyprus no earlier dating than the 10th Century is possible. In fact, Phoenicians probably did not appear in Thasos until the 7th Century (Picard, *J. des S.* 1949, p. 124, n. 3; Pouilloux, op. cit., pp. 54, 356 ff.; Vian, *Les Origines de Thèbes*, p. 66; Albright, *CAH* II, Ch. XXXIII, fasc. 51, p. 42).

2. The earliest shrine of Herakles at Thasos, far from being a Semitic high place, lay at a very low level indeed (Picard, op. cit., p. 125). In fact, *pace* Launey (op. cit., p. 194 ff.), there is not a single indisputably oriental religious practice known on the site (cf. Picard, op. cit., p. 124 ff.).

3. The link with Cadmus casts grave doubts on the entire tradition since C.'s Phoenician affinities are known to be fictitious (n. II, 49).

Clearly there is no case for a Phoenician origin of the Thasian Herakles. The evidence, in fact, suggests the following reconstruction of his *Kultgeschichte* :

1. *Pre-Parian Stratum.* There are features in the Thasian cult of Herakles—the ἱερὸς γάμος (Launey, op. cit., p. 134 ff.) possibly, the cup-

shaped depressions in the central court of the Herakleion certainly (Pouilloux, op. cit., p. 352)—which suggest that its more exotic elements may derive either from Myc.-Minoan sources or, better, from the Pre-Indo-European Mediterranean substrate. The immediate source will have been the Thracians both because they were inhabiting the island when the Parians got there (Archil., ap Str., XII, 3, 20 (C549-50); Picard, *Monuments Piot* 38 (1941), p. 66 ff.; Seyrig, *BCH* 51 (1927), p. 216; cf. Pouilloux, op. cit., p. 16) and also because their goddess Artemis Polo shared the peculiarity of the cup-shaped depressions (Picard, op. cit., p. 114, n. 2). They were the filters through whom these venerable religious traits passed. Furthermore, the clear recognition from the very beginning of the dual nature of Herakles in the demarcation of the τέμενος, the close connection of the divine cult of Herakles with the depressions and the unlikelihood that they would have been taken over in isolation suggest that, in fact, the Parians encountered in Thasos a divinity with whom, for some reason or other, they were bound to come to terms. The obvious choice is one of the Idaean Dactyls (Picard, op. cit., p. 125 ff.), curious figures intimately associated with the Great Mother in Phrygia and Crete and belonging to the hoary animistic stratum of Mediterranean religion (vide Hemberg, *Die Kabiren*, p. 19 ff.). They are by no means always small, as is generally assumed, (the *Phoronis* Schol. Ap. Rh., I, 1129 describes one as μέγας and another as ὑπέρβιος (Kern, *RE* IV, 2018 ff.; Preller-Robert, *GrM* I, p. 657 ff.; v. Geisau, *KP* I, 1363; in general v. Sybel ap Roscher, *ML* I, 940 ff.)) and one is identified with Herakles in later times. The name will, of course, only have been acquired at a relatively late date through the spread of Herakles cults and the attendant syncretism (Farnell, *GHC* p. 125 ff. is ingenious but quite unconvincing in making the Idaean Dactyl Herakles a malicious Elian fabrication) but the important point is the demonstrable fact that the Dactyls were sufficiently virile to justify the identification (cf. Nock, *AJA* 52 (1948), p. 300).

2. *Parian Stratum*. When the Parian colonists arrived c. 680 (Fredrich, *IG* XII, 8, p. 76; v. Gärtringen, *IG* XII, 5, T. 1216; v. Hiller, *RE* VA, 2, 1311) they introduced their Ἡρακλῆς Καλλίνικος (Gruppe, *RE* SB III, 961; Picard, op. cit., p. 115; Pouilloux, op. cit., p. 354). Even if the Dactyl (or related figure) were not yet called Herakles, his sturdy qualities could lead to an identification with the Parian deity and thereby impart an exotic flavour to the Thasian Herakles.

3. *Phoenician Stratum.* Contact between Gks. and Phoenicians in the E. Mediterranean led, among other things, to the identification of Melqart and Herakles, possibly in Cyprus where he certainly acquired the lion-skin (Dussaud, *Syria* 25 (1946-8), p. 221). Either for that reason, or because of intensive commercial activity, Thasian traders established a cult in Tyre itself and the great antiquity of the Tyrian shrine, together with the strange elements in the cult of the Thasian Herakles, led to the claim the god had been imported into Thasos by the Phoenicians, an idea which may well have been nurtured by Theogenes of Thasos (on whom vide Paus., VI, 11, 2 ff.) for his own political ends. Once established, this tradition would attract the ubiquitous Cadmus, and that would give the date suggested by H. as well as generate the legend of the hero Thasos. Other Semitic elements in Thasos will be the result of ordinary Phoenician trading activity.

διξὰ Ἡράκλεια ... ἔκτηνται : Divine cults of Herakles, though rare, are known at Thebes (Isoc., *Philip* 32; Phot., *Bibl* 148a), Athens, which claimed to be the first city to venerate H. as a god (Thphr., *Char* 27; D.S., IV, 39), Sicyon (the Idaean Dactyl Herakles—Paus., II, 10, 1) and Thespiae (id., IX, 27, 6). In general Farnell, op. cit., p. 97; Picard, *BCH* 47 (1923), p. 241 ff.; Seyrig, ib. 51 (1927), p. 185 ff.; Goldman, *Hesperia* Supp. VIII (1949), p. 166 ff.

Hero cults were much more common, e.g. in Attica, Boeotia, Andros, Ithome, Sicyon, Locris, Abia and probably Argos (Murray, *JHS* 22 (1902), p. 1 ff.; Farnell, *GHC* p. 96 ff.).

διξὰ Ἡράκλεια is an ambiguous expression (Launey, op. cit., p. 132, n. 4; cf. *BCH* 61 (1937), p. 400, n. 1). It might mean "two temples of Herakles" (*LSJ*, p. 437, a, s.v. *διϲϲόϲ* II; Powell, *Lexicon*, p. 92, s.v. *διξοί*) or "a double temple in honour of Herakles". Installations which may fit the expression are known at Erythrae (Paus., VII, 5, 5), Cos (Farnell, op. cit., p. 121)—which is only a stone's throw from Halicarnassus—and at Thebes where the temple of Herakles the god stood next to the *Geburtshaus* of the hero (Paus., IX, 11, 1 ff.; Wilamowitz, *Eur. Her.*, I, p. 35). Furthermore, it is possible to interpret the architecture of the Thasian Herakleion as enclosing a shrine for the god and the hero (Launey, op. cit., p. 167; Pouilloux, op. cit., p. 352). Indeed, Launey suggests that it was the situation at Thasos which provoked H.'s recommendation on *διξὰ Ἡράκλεια* (op. cit., p. 182; id., *BCH* 61 (1937), p. 400, n. 1).

καὶ τῷ μὲν ὡς ἀϑανάτῳ ... ϑύουσι, τῷ δὲ ἑτέρῳ ὡς ἥρωι ἐναγίζουσι : Technically correct. There were several differences in the ritual of sacrifice in divine and chthonic cults under which those of heroes fell :

1. The *θυσία* was accompanied by a common meal at the altar whereas this was very rare with the *ἐνάγισμα*.
2. The victim in a *θυσία* was lifted from the ground and its head drawn back. That in the *ἐνάγισμα* was sacrificed with its head downwards, the blood usually pouring into a *βόθρος*.
3. A divine altar (*βωμός*) was high whereas the hero's altar (*ἐσχάρα*) was much lower and usually round, serving only for libations.
4. A god might receive a sacrifice throughout the year, whereas a hero would receive offerings once a year only.

Bibliography : Eitrem, *RE* VIII, 1119 ff.; Farnell, *GHC* p. 95 ff.; Ferguson-Nock, *HThR* 37 (1944), p. 141 ff.; Guthrie, *The Greeks and their Gods*, p. 231 ff.; Nilsson, *GgrH* I, pp. 378 ff., 715 ff.

45. λέγουσι δὲ πολλὰ ... ὁ μῦϑός ... λέγουσι : For the sentiment cf. Hec., *FgrH* I, F.1.

ὡς αὐτὸν ἀπικόμενον ἐς Αἴγυπτον ... πάντας σφέας καταφονεῦσαι : The Egs. are left in anonymity but the tale is usually connected with the legendary king Busiris, the eponym of the city Busiris in the Delta. The antiquity of the tale is impossible to establish. Busiris is mentioned in a spurious fragment of Hes. (F. 378 (Merkelbach-West)), without any reference to Herakles, and in Pherecyd. (*FgrH* 3, F.17). The legend appears to have been popular amongst the *λογογράφοι* (Isoc., XI, 36 ff.) and, most interesting of all, it was treated by Panyassis, H.'s uncle (Kinkel, *EGF* I, p. 253), in the light of which H.'s accusations of *εὐήθεια* acquire an intriguing colouring. The best illustration of the tale is the Busiris Hydria from Caere (c. 520 B.C.), in origin probably Ionian (*CAH*^{1} Plates, I, p. 382). Indeed, v. Gärtringen's attribution of the entire legend to Ionian sources is well nigh certain in view of the history of Gk. activities in Egypt (Introduction, p. 13 ff.). In general Stoll ap Roscher, *ML* I, 834 ff.; v. Gärtringen, *RE* III, 1074 ff.

ἐμοὶ μέν νυν δοκέουσι ... μυριάδας φονεῦσαι : An example of Herodotean rationalism (vide supra, p. 201). The truth of the legend is attacked through two arguments :

(a) A *πίστις κατὰ τὸ ἦθος* (*τῆς Αἰγυπτίων φύσιος ... κῶς ἂν οὗτοι ἀνθρώπους θύοιεν;*).
(b) *τὸ ἀδύνατον*. It is a physical impossibility for a man to accomplish such a feat.

The incidence of human sacrifice in Egypt has been the subject of some debate and has been supported by the following evidence :

1. Statements of classical writers throughout antiquity. These are discussed by Gwyn Griffiths (*ASAE* 48 (1948), p. 409 ff.) who concludes that only two constitute proof viz. Ach. Tat., III, 15 and Procop., *Pers* I, 19, 36. Neither of these texts is, however, at all convincing. Procop. certainly mentions human sacrifice at Philae but it is the Blemmyes who perform it not the Egs. whereas Ach. Tat.'s authority on Eg. Religion is not great. He could easily be writing under the influence of the Busiris legend and classical spy-stories derived from it.

2. Eg. representations (Davies, *Five Theban Tombs*, pl. VIII, with p. 15; Weigall, *ASAE* 8 (1907), p. 45 ff.; Mariette, *Dendérah*, IV, pl. 56; Blok, *AcOr* 7 (1929), pl. 1-2; Junker, *Onurislegende*, p. 21; Emery, *Tomb of Hemaka*, pl. 18). Unfortunately this evidence is less cogent than it looks; for Eg. pictures are as likely to depict what an act symbolizes as the act itself (cf. Bonnet, *RÄRG* p. 454).

3. Eg. texts (*Urk* IV, 1297 ~ *BAR* II, § 797; Caminos, *Chronicle of Prince Osorkon*, § 65 ff. ~ *Reliefs & Insc. of Karnak*, III, pl. 18, 35-36). Again unsatisfactory evidence. *Urk* IV refers to punishment not sacrifice. The killing is simply a barbarous vengeance wrought upon Nubian rebels. As for the Osorkon text, the damaged state of the inscription makes it impossible to be certain of its meaning but even if Caminos' translation is correct it does not amount to proof of human sacrifice. The simile in question may simply indicate the helplessness of the captives and the expression "*sḫ(r)·f n·f st*" "he struck them down for him" may mean no more than that the prisoners were being executed *on behalf of* the god. It does not prove that the prisoner was brought into the temple, led to an altar and there despatched as an offering.

4. Archaeology. Evidence from excavations in the Royal Cemetery at Abydos is usually taken to prove that some of the kings of the Ist Dyn. were buried with sacrificed retainers (Edwards, *CAH* I, Ch. II, fasc. 25, p. 51 ff.). Re-interment of servants who had been dead for some time rather than mass sacrifice would seem to be a possible alternative but, even if the current view is correct, this custom, which is confined to the Ist Dyn., proves nothing for the L.P.

Our conclusion is, therefore, that there is no evidence that the Egs. practised human sacrifice after the Ist Dyn., if then, and that H.'s scorn for the idea is completely justified.

The tradition can be explained by the interaction of several factors :

1. The Eg. distaste for strangers.
2. Ethiopian customs, which might affect Gk. tradition in several ways :

(a) There are indications that the sacrifice of strangers was practised by the Ethiopians (Hld., X, 7). By himself such an author could not, of course, be trusted but human sacrifice was practised in the mortuary cult in Nubia long after it had disappeared in Egypt (Hofmann, *Die Kulturen des Niltals von Aswan bis Sennar*, Index, s.v. Menschenopfer) while the episode of Ergamenes (D.S., III, 6, 3 ff.) indicates a barbarous religious climate even in Ptol. times.

(b) Man. Hist. (*FgrH* 609, F.2, 3a-c, p. 48-9) speaks of the burning alive of the Eg. Pharaoh Bocchoris after his capture by the Ethiopian King Sabakon. This need not be sacrifice—in fact, burning as a punishment is well documented in Egypt (cf. *Urk* III, 112, 8; in general de Meulenaere *CdE* 28 (1953), p. 257 ff.)—but if this punishment were carried out *on behalf of the god*, as in the case of the Osorkon inscription, it might well have looked like sacrifice and been so interpreted by foreigners.

(c) The existence of a tradition of the sacrifice of strangers in the Tauric Chersonese has probably contributed something (H., IV, 103).

46. τὰς δὲ δὴ αἶγας καὶ τοὺς τράγους τῶνδε εἵνεκα ... οἱ εἰρήμενοι : Vide nn. II, 42, 1-2; 65, 1.

τὸν Πᾶνα τῶν ὀκτὼ θεῶν ... τῶν δυώδεκα θεῶν φασι γενέσθαι :

Cf. II, 145, 1. Pan = Mendes (II. 46, 4). Pan is also identified with Min (n. II, 91) but Gwyn Griffiths' suggestion (*JHS* 75 (1955), p. 22 ff.) that H. may have confused Min and Mendes is quite unnecessary. Thus, H. was told that Mendes was a member of the Ogdoad from whom the Heliopolitan Ennead sprang (vide n. II, 43, 1).

It is difficult to see Mendes as one of the Ogdoad; for this would make him one of the frog-headed *'Imn*, *Kk*, *Ḥḥ*, *Nun*. The Ogdoad was, however, responsible for the creation of the sun-god, who then created the Ennead (vide supra), and Mendes is frequently identified with Khnum-rēʿ, an aspect of the creator himself. *Urk* VI, 74, 9, with particular emphasis on the fertility of the ram, informs us that Mendes actually created the gods. He is also included amongst the great gods of primeval times (Bonnet, *RÄRG* p. 869 ff.).

γράφουσί τε δὴ καὶ γλύφουσι οἱ ζωγράφοι ... τὤγαλμα κατά περ Ἕλληνες αἰγοπρόσωπον καὶ τραγοσκελέα : On the iconography of Mendes vide n. II, 42, 2. The iconography of Pan passes through several stages :

1. Completely theriomorphic, usually a goat standing on its hind legs (Brommer, *MarbJb* 15 (1949-50), p. 7, fig. 1, 2; Dawkins, *Artemis Orthia*, pp. 262, 269, pl. 184, 19; 189, 23-25; Boardman, *Gk. Vases in Cape Town*, pl. 2).
2. Goat plus human elements c. 490 B.C. (Brommer, op. cit., p. 14 ff. with fig. 14; Caskey-Beazley, *Vases Boston*, II, no. 94, pl. 47 ff. in which head, tail and feet are goat).
3. In the 4th Century in Italy, apart from small horns and a minute tail, he is human (Schauenburg, *MDAI(R)* 69 (1962), p. 27 ff.).

The comparison with Mendes, who is always completely theriomorphic, makes it clear that H. is thinking of 1, though he must have known of other types of representation.

σέβονται δὲ πάντας τοὺς αἶγας οἱ Μενδήσιοι ... τιμὰς μέζονας ἔχουσι : Vide nn. II, 42, 65.

ἐκ δὲ τούτων εἷς μάλιστα ὅστις ... πένθος μέγα τίθεται : The obsequies of the sacred animal were always conducted with great pomp (vide infra, p. 295 ff.).

γυναικὶ τράγος ἐμίσγετο ἀναφανδόν. τοῦτο ... ἀπίκετο : There is a strong tradition of bestiality in the Mendesian Nome (Pi., F. 190 (Bowra); Aristid., *Or* 36, 112; Clem. Al., *Protr* II, 32, 4) and there is some evidence that the tradition is correct; for a mould has been found in the vicinity of Mendes which represents bestiality between a woman and a goat (Michaïlidis, *BIFAO* 63 (1965), p. 139) and there is proof of its currency in the Near and Far East as a cult act (Krebs, *FuF* 37 (1963), p. 19 ff.), a practice possibly echoed by its occasional occurrence in Gk. mythology (e.g. Pasiphae, Leda and Penelope). Claims of Pharaoh to be the son of the Ram of Mendes (Edgerton-Nelson, *Hist. Records of Ramesses III*, p. 121) should not, however, be understood as in any way implying intercourse between the queen and the god. It is parallel to his claim to be Son of the Sun. Note that in order to obtain fertility women often exposed themselves in the presence of the sacred animal (Cosmas, II, 119 ∼ Hopfner, *Fontes*, p. 742). Bibliography as for II, 42.

47. **ὗν δὲ Αἰγύπτιοι ... εἶναι :** Pig farming is known in Egypt from pre-historic times (Kees, *Götterglaube*^{2}, p. 70; id., *Ägypten*, p. 20 ff.; id., *Ancient Egypt*, p. 91; Ranke, *RdV* XI, p. 383; Keimer, *BIE* 19 (1937), p. 147 ff.; Bonnet, *RÄRG* p. 690). Two species occur in antiquity, the domesticated *Sus scrofa ferus* found in Europe (Keimer, op. cit., pl. IIIa, fig. 4) and *Sus vittatus* (ib., pl. IIIb, fig. 5; pl. IIIc, fig. 6), though the latter is unknown during the Pharaonic Period.

The ancients are not unanimous on the Eg. attitude. Some say the pig was sacred (Aristid., *Ap* 12; Clem. Al., *Protr* I, 2; Cyril, *De Ador* I, Migne Vol. 68, 189); others agree with H. (Justin Martyr, *Quaest* 35; Origenes, *Cels* V, 34). The latter are right; for in historical times it was indubitably regarded as unclean (Hopfner, *Tierkult*, p. 60 ff.; Keimer, op. cit., p. 148 ff.; Bonnet, op. cit., p. 690 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 331). The error will probably have arisen from the confusion between honour-taboo and hatred-taboo (Hopfner, op. cit., p. 60) but it should be noted that the ambivalence usual in animal cults (Introductory n. II, 65-76) occurs also with the pig; for the fertility of the sow led to the idea of the Heavenly Sow as a fertility and mother goddess (Bonnet, op. cit., p. 691).

τοῦτο δὲ οἱ συβῶται ... ἐς ἱρὸν οὐδὲν τῶν ἐν Αἰγύπτῳ ἐσέρχονται μοῦνοι πάντων : For representations of swineherds see Tylor-Griffith, *Paheri*, pl. III; id., *Renni*, pl. II, one of whom (Renni, l.c., n. 3) appears to be a dwarf. The stigma mentioned by H. is not directly demonstrable but probable :

1. At II, 164 swineherds are mentioned in fourth position.
2. Synesius (*De Prov* I, 5 ff.; cf. J., *AJ* II, 7, 5; *Genesis* 46, 34) mentions religious restrictions on swineherds.
3. The decree of Aurelius Besarion (Gauthier, *Kalabchah*, I, p. 193) gives clear instructions to swineherds to keep their charges away from the temple. It would be a short step to forbid the swineherds themselves.

The occurrence of officials in charge of pigs in the M.K. (Sethe, *Lesestücke*, p. 79; cf. *Urk* IV, 75, 15) and the presence of large herds on temple estates in the XIXth Dyn. (Griffith, *JEA* 13 (1927) pl. XL-XLIII) in no way disproves H.'s statement for the 5th Century B.C.; for the *Verfemung* of Seth was progressive and probably only in the L.P. led to widespread hatred of the animal and its herdsmen (cf. Kees, *Ancient Egypt*, p. 91). Hopfner's suggestion (op. cit., p. 63) that the statement of H. is an exaggeration due to the contempt in which the lower classes were held by the Eg. scribes is not likely.

οὐδέ σφι ἐκδίδοσθαι ... ἄγονται ἐξ ἀλλήλων: H. is probably exaggerating the significance of this situation. Pestman writes "The choice of the spouse is often made not only within the same family circle but also within the same social circle. Herodotos tells us this with regard to swine-herds; those deeds handed down to us relating to marriage also provide evidence of it occurring in other occupations. In those cases in which the position of the man and the woman or her father is known to us, it often appears to be similar. In cases too, of the wife marrying again, the different husbands often have the same position" (*Marriage and Matrimonial Property*, p. 4).

τοῖσι μέν νυν ἄλλοισι θεοῖσι ... πατέονται τῶν κρεῶν : Yet another respect in which Eg. practices were quite opposite to those of Greece; for pigs were amongst the commonest sacrifices offered in Gk. rites, ranking with sheep, bulls and goats. They were, however, forbidden in some cults and in some states were not even permitted in the temple area (Orth, *RE* IIA, 811 ff.; Stengel, *Gr. Kultusaltertümer*, p. 121 ff.;

Nilsson, *GgrR* I, pp. 213, 321). In Egypt a pig was offered during the Festival of Ptaḥ-Sokar-Osiris at Medinet Habu on the 24th Day of the 4th Month of Akhet (Nelson et al., *Medinet Habu*, III, pl. 158). At Edfu a swine sacrifice took place on the 15th of the 1st Month of Shomu (full moon) (Alliot, *Le Culte*, I, p. 231). Cf. in general Junker, *ZÄS* 48 (1911), p. 75; Hopfner, op. cit., p. 60; Kees, *NAWG* 1942, p. 72.

Σελήνῃ δὲ ... πανσελήνῳ : Selene clearly refers to Isis and Dionysus to Osiris (Bonnet, op. cit., p. 691). Hopfner's suggestion that Selene refers to Ḥorus or Iaḥ (op. cit., p. 62) is quite untenable because both of these Eg. deities are male. Plu. (*DIO* 8 (*Mor* 354)) and Man. Hist. (*FgrH* 609, F. 23) confirm sacrifice at the full moon.

δι'ὅ τι δὲ τοὺς ὗς ... θύουσι : The pig taboo is common in the East (Hopfner, op. cit., p. 60; Farbridge, *HERE* XII, p. 132 ff.; Ranke, *RdV* XI, p. 383 ff.), ultimately for health reasons (Hopfner, l.c.) :

1. The fatty flesh is unhealthy in warm climates because it produces skin complaints.
2. The parasites living on the pig are dangerous.

As usual these mundane factors were reinforced by religious considerations; for in Egypt the animal was connected, like the antelope, ass and crocodile, with Seth, the arch-enemy of Osiris (Plu., op. cit., 8 (*Mor* 354); Ael., *NA* X, 16; Newberry, *JEA* 14 (1928), p. 213 ff.; Frankfort, *Cenotaph of Seti I*, pl. 55; Kees, *Götterglaube*^{2}, p. 70; id., *RE* IIA, 1901; Bonnet, op. cit., p. 690 ff.). The *λόγος* mentioned by H. is probably that of the attack of Seth upon the moon = Osiris discussed in Plu. (op. cit., 55 (*Mor* 373); cf. Gwyn Griffiths, *Conflict*, pp. 108 ff., 124 ff.). Thus, Seth = the pig emerges as an enemy of the moon and the offering of the pig to Osiris (or Isis who is also identified with the moon) becomes immediately intelligible as a *Vernichtungsopfer* (n. II, 39). At the full moon the stage is reached where the moon begins to wane. This was interpreted as the result of an attack of Seth. Thus, by ritually destroying the animal regarded as his embodiment, the Egs. hoped to weaken the power of the god himself and assist the moon in its struggle.

θυσίη δὲ ἥδε ... ἔπειτα καταγίζει πυρί : Impossible to substantiate in detail. For Eg. sacrifice see on II, 39 ff.

τὰ δὲ ἄλλα ... οὐκ ἂν ἔτι γευσαίατο : That swine were eaten in the N.K. is certain (Keimer, op. cit., p. 149) but great changes had taken place by the 5th Century (vide supra, p. 217). H. can be supported by several arguments :

1. He is generally reliable on such matters and is probably correct here.
2. The Eg. refusal to eat swine is mentioned by S.E. (*P* III, 24 (223)).
3. According to Montet (*Kêmi* 11 (1950), p. 85 ff.) the word *bwt* means "forbidden fruit". If this is true, *CT* CLVII/*BD* CXII substantiate H.'s statement perfectly.

However, over-schematization cannot be ruled out. There were deviants even amongst the Jews and it is, therefore, conceivable that, even if most pigs in H.'s time were raised for sacrificial purposes (cf. Montet, op. cit., p. 93), some at least were eaten.

οἱ δὲ πένητες αὐτῶν ... ὀπτήσαντες ταύτας θύουσι : The use of ritual models is well attested in ancient Egypt :

1. Pottery or stone figures of oxen, geese and loaves are used in the mortuary service (Hopfner, op. cit., p. 62). For close Gk. parallels see Hsch. s.v. *῞Εβδομος βοῦς*; id., s.v. *βοῦς*; cf. Schol. Th., I, 126; Suidas, s.v. *βοῦς ἕβδομος*.
2. At Edfu hippopotami of red clay (Alliot, *Le Culte*, II, p. 521 ff.), wax (Chassinat, *Edfou*, V, p. 133) and dough (Alliot, op. cit., p. 789) were sacrificed. The dough was called *š‘wt* (*Wb* IV, p. 421, 3) and is paralleled by the dough of corn kneaded with fat and honey used in modern times to make traditional cakes on the first day of the Muslim Year. These cakes once baked are whitish in colour. The *σταιτίνας ... ὗς* of H. were probably made of this very substance (Alliot, op. cit., p. 789, n. 1).
3. Ritual models of cult objects made of bread seem to have been used commonly in the cult of Osiris (Chassinat, *Mystère*, pp. 151, 164 ff., § 6).
4. Wax images of Seth were sacrificed in the ritual of Abydos by being speared, cut up and burned (*Urk* VI, 4, 36).

Since, therefore, we can parallel the material of the sacrificial animal, the connection with Seth and the use of model sacrifices, we must conclude that H. is correct.

48. τῷ δὲ Διονύσῳ ... τῶν συβωτέων : Vide n. II, 47, 2.

πλὴν χορῶν : *χορός* may bear several meanings :

1. The place where a dance is held.
2. The group which performs the dance.
3. The choral dance itself.

(Reisch, *RE* III, 2, 2373 ff.; *LSJ* p. 1999, b, s.v. *χορός* passim). H.'s *χοροί* clearly refers to 3 (*LSJ* l.c. 1).

Choral lyrics were known in Greece from Homeric times (Bowra, *Greek Lyric Poetry*^{2}, p. 4; Schmid-Stählin, *GLG* I, 1, p. 452 ff.; Lesky, *GgrL* p. 171 ff.) and as dithyrambs formed an integral part of Dionysiac worship from the 7th Century (cf. Archil., F. 77 (Diehl); H., I, 23; Suidas, s.v. *'Αρίων*; Pickard-Cambridge, *DTC*^{2} p. 10 ff.). Dancing is well known in the cult of Osiris (*Urk* V, 124; Kamal, *ASAE* 38 (1938), p. 278) but it bore little resemblance to Gk. *χοροί*.

It is strange that H. should regard the absence of *χοροί* as the only major difference between Eg. and Gk. rites in honour of Dionysus. What of dramatic productions? Two answers suggest themselves :

1. Drama is intimately associated in our minds with Dionysiac Festivals but this was only true of a few Gk. states, pre-eminently Athens. Therefore, H. could be thinking of the customs of the Gks. in general.
2. H. may be aware that dramatic rites were held in honour of Osiris (cf. Sethe, *Lesestücke*, p. 70 ff.; Bonnet, *RÄRG* p. 187 ff.).

ἀντὶ δὲ φαλλῶν : *φαλλοί* are of great importance in the cult of Dionysus and, as is usually the case, reflect the god's connection with fertility (Stengel, *Gr. Kultusaltertümer*, p. 234 ff.; Hartland, *HERE* IX, p. 816 ff.; Roloff, *Artemis Lexikon*, 2282; Herter, *RE* XIX, 2, 1683 ff.; Nilsson, *Gr. Feste*, p. 263 ff.; id., *GgrR* I, pp. 118, § 4, 590 ff.). At Athens they were carried in procession during the City Dionysia (Pickard-Cambridge, *DFA*^{2} pp. 57, 61 ff.) and the Rural Dionysia (Ar., *Ach* 247 ff.; cf. Plu., *Mor* 527; Pickard-Cambridge, op. cit., p. 43 ff.) and also figure in the Haloa in which Dionysus played an important part (Schol. Lucianus, *DMeretr* 7, 4 (298); Stengel, op. cit., p. 234 ff.; Harrison, *Prolegomena*, p. 145 ff.; Farnell, *CGS* III, p. 45 ff.; Hartland, op. cit., p. 822). Ceremonial *φαλλοί* were even sent to the Great City Dionysia by Athenian colonies (*IG* I^2, 45; II^2, 673) and phallus-formed choregic monuments were raised (*BCH* 31 (1907), p. 504 ff. + fig. 18-20; 46 (1922), p. 99; Buschor, *MDAI(A)* 53 (1928), p. 96 ff.). Phallic rites in honour of Dionysus are known from other parts of Greece (Ephesus (Heraclit., *DK* 22, F. 15); Delos (Nilsson, *Gr.Feste*, p. 280 ff.); Lesbos (Paus., X, 19, 3; *IG* XII, 2, 503); Alexandria (Ath., V, 201e) etc.). Note, however, that Dionysus himself is never represented ithyphallically though he is often surrounded by ithyphallic earth demons such as Silens and Satyrs whence derive the obscene costumes of actors and chorus in comedy and satyr-drama (Roloff, op. cit.; Herter, op. cit., 1701 ff.; Nilsson, *GgrR* I, p. 590; Pickard-Cambridge, *DFA*^{2} p. 220 ff.). This, of course, explains H.'s interest in the ithyphallic iconography of the Eg. Dionysus.

The origins of the phallic cult in Greece are unknown. It is found in the country during the Stone Age (Herter, op. cit., 1685 ff.) but has left no certain traces in Mycenaean-Minoan contexts (Roloff, op. cit.; Nilsson, op. cit., p. 593 ff.), though the worship of Dionysus at this period is almost certain (Ventris-Chadwick, *Documents*, p. 127; Chadwick, *The Decipherment of Linear B*, p. 124; Palmer, *Mycenaean Greek Texts*, Gloss. s.v. *di-wo-nu-so-jo*). It then reappears in the Archaic Period. Since one would expect a phallic cult to be of considerable antiquity, it is possible that the lacuna is due to the chances of discovery. Nilsson's suggestion (l.c.) that phallism derives from Asia Minor, the home of the ithyphallic Priapus with whom Dionysus was identified, and was brought by the "Phrygian" Dionysus is attractive but, as he himself admits, this does not explain phallism in cults such as that of Artemis.

Other deities with phallic rites are Hermes (vide n. II, 51), Demeter (Nilsson, op. cit., I, p. 119 ff.), Artemis (Nilsson, op. cit., I, p. 162), the Cabiri (Nilsson, op. cit., I, p. 671; n. II, 51), Priapus (Wilamowitz, *Der Glaube*, II, p. 320 ff.) and Aphrodite (Nilsson, op. cit., I, p. 525).

ἄλλα σφί ἐστι ... τοῦ ἄλλου σώματος : Representations of and references to ithyphallic Osiris are common (Wiedemann, *RT* 20 (1898), p. 134 ff.; Erman, *ZÄS* 38 (1900), p. 30 ff.; Zimmermann, *Die ägyptische Religion*, p. 44 ff.; Calverley, *Temple of King Sethos I*, II, pl. 6; Mariette, *Dendérah*, IV, pl. 70), though he shares the characteristic with other gods (e.g. Mendes, Min, Bes, Bata, Ḥorus; cf. Roeder, *Volksglaube im Pharaonenreich*, p. 194; Bonnet, op. cit., p. 590 ff.). The size of the phallus (*πολλῷ τεῳ ... σώματα*) is often vast (Leemans, *Aegyptische Monumenten Leyden*, I, pl. 18; Quibell, *Saqqara*, I, p. 13, pl. 31; Weber, *Die ägyptisch-griechischen Terrakotten*, p. 55 ff., no. 62). The symbolism has the same fertility implications as in Greece (Roeder, op. cit., p. 194; Bonnet, op. cit., p. 591 ff.), though apotropaic aspects are also detectable (Bonnet, op. cit., p. 590). The importance attaching to the Osirian phallus is reflected in the extreme care devoted to it during the process of mummification (Bonnet, l.c.). *Φαλλοφορίαι* are well known in Egypt (Hogarth et al., *JHS* 25 (1905), p. 130, n. 6; Weber, op. cit., pp. 73 ff.; 102, no. 139).

ἀγάλματα νευρόσπαστα : Although the present writer knows of no *ἀγάλματα* of this kind, the occurrence of *νευρόσπαστα* as toys, sometimes extremely complicated, proves that the Egs. were perfectly capable of making such things (Davies, *Tomb of Ḳen-amūn*, pl. IX; Wilkinson, *Manners and Customs*, II, p. 64; mechanical toys, Garstang, *Burial Customs*, p. 152 ff.; *Ägyptisches Museum Berlin* (1967), p. 57; Hayes, *Scepter of Egypt*, I, p. 222; Erman-Ranke, *Ägypten*, p. 192). *Νευρόσπαστα* "marionettes" are well known in Greece, though practitioners of the puppeteer's art were much despised (Herzog-Hauser, *RE* XVII, 161 ff.).

The movement of the phallus will have been caused by pulling a string to bring it to an erect position, thereby symbolizing the resurrection of the god and magically inducing fertility (Bonnet, op. cit., p. 580). Similar devices are known from Africa in modern times :

1. In a festival of the god Legba on the Slave Coast a phallus was carried aloft on a long pole with great pomp. "The worshippers dance and sing around it, and the image is waved to and fro, and pointed towards the young girls, amidst the laughter and acclamations of the spectators. Sometimes the phallus is concealed by a short skirt, or petticoat, *which a man causes to fly up by pulling a string*" (Ellis, *Ewe*, p. 44; cf. id., *Yoruba*, p. 65).
2. There is an 18th Century record from the Congo of masked men executing a pantomime, in which they carry *an enormous phallic figure worked by a string* (Grandpré, *Voyage à la Côte Occidentale d'Afrique*, I, p. 118).

The mention of *γυναῖκες* may imply that the ritual was concerned above all with human fertility but the analogy of the Thesmophoria shows that this is not a necessary inference.

H.'s statements on this festival are often related to the Pamylia, an Osirian phallic procession mentioned by Plu. (*DIO* 12, 36 (*Mor* 355, 365)) who connects it with a Theban called Pamyles. P. is, however, a god. Hsch. (s.v. *Πααμύλης*) describes him as an *Αἰγύπτιος θέος πριαπώδης* and speaks of him in the same breath as Sokaris. There is also evidence of a divine name *'Αμουλ* (Krebs, *ZÄS* 32 (1894), p. 49, 63; Preisigke, *Namenbuch*, 27, s.v. *'Αμουλῆ* ff.) which looks like Pamyles without the definite article *pꜣ*. It seems, therefore, reasonable to deduce that Pamyles/ Paamyles is identical with Osiris, though his precise status remains questionable. The form of the name (definite article *pꜣ* + noun) suggests that it is simply an epithet of Osiris rather than the name of an originally independent god. It is, however, clear that the identification of the Pamylia with the festival discussed by H. could well be right, though it may have been no more than a locally restricted version thereof.

Bibliography : Méautis, *Mus. Belge* 31 (1927), p. 51 ff.; Weber, *Die ägyptisch-griechischen Terrakotten*, pp. 73, 77; Rusch, *RE* XVIII, 2053; Drexler ap Roscher, *ML* III, 1239 ff.; Bonnet, *RÄRG* p. 580.

προηγέεται δὲ αὐλός : For *αὐλός* see n. II, 60, 1. Music was a standard element of the cult in Eg. and served several functions :

1. It both expressed and heightened the religious excitement.
2. It was a logical part of the cult. The divine service was modelled on that of great Eg. lords. Since they enjoyed music, the god too must have it.
3. It was thought to drive away evil spirits.

Generally it was confined to songs accompanied by the tinkling of the sistrum and *menat*. The *αὐλός* and similar instruments are a common feature (Str., XVII, 1, 44 (C814); Junker, *Götterdekret*, pp. 21, 31; id., *Stundenwachen*, p. 72; cf. Perdrizet, *Les Terres Cuites*, p. 120 ff.) as well as the harp and drum. In the temple ritual music-making was the duty of the large group of priestesses called *šmʿyt* (vide n. II, 35, 4). This passage refers to rustic fertility rites (Bonnet, op. cit., p. 580) but it is likely that some at least of the *γυναῖκες* were, or had been, *šmʿyt* in some local shrine.

αἱ δὲ ἕπονται ἀείδουσαι τὸν Διόνυσον : Festival hymns "praising the beauty of the god in all his names" are well known (Junker, *ZÄS* 43 (1906), p. 101 ff.; Sethe, op. cit., p. 64, 2 ff.; cf. Blackman, *RTM* I, p. 22, pl. II-III; II, p. 24, pl. XV; Gardiner, *Amenemhēt*, pp. 63, 94, pl. XIX ff.; cf. n. II, 79; Wolf, *Das schöne Fest*, p. 56 ff.). A hymn was sung in Dionysiac *πομπαί* called the *φαλλικόν* or *ἐπίφαλλος* (Ar., *Ach* 261; Ath., XIV, 618c).

δι'ὅ τι δὲ μέζον ... λόγος περὶ αὐτοῦ ἱρὸς λεγόμενος : Again reticence. The phallus of Osiris was the only part of his body which was not recovered after its dismemberment by Seth. According to Plu. (*DIO* 18 ff., 36 (*Mor* 358, 365); cf. D.S., I, 22,6), when Isis reconstituted his body, she used a model phallus to replace the missing member and for this reason the phallus was carried in procession in Egypt. H.'s *λόγος* will refer to this legend or one related closely to it (Herter, op. cit., 1673, 1717).

49. ἤδη ὦν δοκέει μοι Μελάμπους ὁ 'Αμυθέωνος ... καλεομένην χώρην : Note :

(a) The marked scientific spirit of this discussion :

 (1) H. attempts to explain the differences between the Eg. Dionysiac cult and that in Greece which might be an obstacle to his theory.
 (2) Having postulated a borrowing (II, 48) he tries to establish a route by which it could have been made.

(b) The theology is strictly Herodotean. The Dionysus in question is not identical with Dionysus, son of Semele (II, 145-146), the relationship being comparable with that between Herakles-*θεός* and Herakles-*ἥρως*, son of Alcmene (nn. II, 43-45). The D. of II, 49 is the Eg. god brought by Cadmus before the birth of his grandson.

Μελάμπους ὁ 'Αμυθέωνος ... ἀλλ'ἔμπειρος : Melampus of Pylos, whose very genealogy declares a close connection with prophecy (mother Eidomene, brother Bias, wife Iphianassa, sons Mantios and Antiphates, grandson Amphiaraus—v. Geisau, *KP* III, 1160), appears from an early period in Gk. legend as a great *ἰατρόμαντις* (Hom., *Od* XI, 285 ff.; XV, 225 ff.; Apollod,. I, 9, 11 ff.). His *μαντική* was not ecstatic but relied on signs from birds or even the utterances of worms. As a *ἰατρός* he cured the Argive women and the Proteids when they were possessed by Dionysus. Indeed, Apollod. describes him as the inventor of cures by drugs and purifications. Though the former may be discounted, the latter fits well with the activities of the ἰατρομάντεις violently castigated in *Morb Sacr* II-IV. Such figures have clear affinities with shamanism and are particularly common in the widespread movement of legalistic and ecstatic religion characteristic of the Archaic Period and identifiable even in H. in such figures as Abaris of Croton, Aristeas of Proconnesus, Hermotimus of Clazomenae and even Empedocles of Agrigentum (Dodds, *The Greeks and the Irrational*, p. 135 ff.; Nilsson, *GgrR* I, p. 613 ff.; Löffler, *Die Melampodie*, p. 14 ff.). It would, however, be quite mistaken to confine shamanistic phenomena to that period and Parke may well be right when, on the basis of the name Melampus ("Blackfoot"; cf. ἀνιπτόποδες), the method of μαντική (vide n. II, 52, 2) and the occurrence of the oak in his legend (Apollod., I, 9, 11), he considers M. connected with the extremely primitive Selloi priests of Dodona (*Oracles of Zeus*, p. 165 ff.). M. may, in fact, have been a great shaman of extreme antiquity who had attracted an entire legend around him or simply the "ideal" shaman. Whether the so-called tomb of M. at Aegosthena in the Megarid (Paus., I, 44, 5) should be treated as genuine (as by Pley, *RE* XV, 1, 392 ff.) or simply as an anonymous tomb to which the great man's name had gravitated we cannot say.

Although the art of the ἰατρόμαντις lay under the patronage of Apollo (Hp., *Ep. ad Philopoem.* II), M. developed a connection with Dionysus, particularly the more ecstatic aspects, *via* the legends of the Argive women and his Proteids and became, either through H. or a predecessor, the ἐξηγητής of his cult. This notion did not, however, win any great popularity and is completely ignored by Apollod.

Bibliography : Wolff ap Roscher, *ML* II, 2567 ff.; Bethe, *Thebanische Heldenlieder*, p. 173 ff.; Preller-Robert, *GrM* II, p. 58 ff.; Friedländer, *Argolica*, p. 31 ff.; Pley, *RE* XV, 1, 392 ff.; Löffler, *Die Melampodie*, passim; Schauenburg, *Artemis Lexikon*, 1895; Nilsson, *GgrR* I, Index, s.v. Melampus; Parke, *The Oracles of Zeus*, p. 165 ff.; v. Geisau, *KP* III, 1160 ff.

Ἕλλησι γὰρ δὴ Μελάμπους ... ἢ ἄλλο κού τι νόμαιον : The argument breaks down as follows :

1. The unstated premise which is nought but the *post hoc ergo propter*

hoc fallacy. The similarities, to H., could have no other explanation than that Greece had borrowed from Egypt (Introduction, p. 147 ff.). The alternative was inconceivable (*οὐ μὲν οὐδὲ φήσω ... κού τι νόμαιον*).
2. The Dionysiac rites were un-Gk. Therefore, similarities cannot be accidental and must be the result of foreign influence (*οὐ γὰρ δὴ συμπεσεῖν ... καὶ οὐ νεωστὶ ἐσηγμένα*).

ὁμότροπα γὰρ ἂν ἦν τοῖσι Ἕλλησι καὶ οὐ νεωστὶ ἐσηγμένα : Foreign elements there certainly are; for Thracian influence was paramount in the classical cult of Dionysus (Nilsson, op. cit., p. 564 ff.). H. would, however, have been surprised to learn that D. was worshipped in Greece during the Myc. Period as the dying god of vegetation (Ventris-Chadwick, *Documents*, p. 127; Chadwick, *The Decipherment of Linear B*, p. 124; Palmer, *Mycenaean Greek Texts*, p. 255, Gloss. s.v. *di-wo-nu-so-jo*). This is probably the origin of the classical traces of this concept in the Dionysiac cults of Laconia and Boeotia (Nilsson, op. cit., pp. 580, 598) which bear a close similarity to that of Phrygia, though some would prefer to postulate direct foreign influence from Asia Minor (Nilsson, op. cit., p. 578 ff.). Note, however, that H. can confuse primitive with non-Gk. as easily as a modern scholar and that the unnamed features which he has in mind may well have been found in Gk. religion time out of mind.

πυθέσθαι δέ μοι δοκέει μάλιστα Μελάμπους ... παρὰ Κάδμου ... χώρην : The link between the Elian Melampus and Cadmus is Dionysus. The latter was extremely popular in Boeotia in classical times, possibly because of the survival of pre-Dorian cult, possibly through the Thracian immigration during the Dark Ages (Nilsson, op. cit., p. 568). C., who figures prominently in legend, particularly Boeotian legend, as the founder of cults (vide infra), would inevitably be connected with the foundation of that of D. and was eventually linked with the god genealogically as his grandfather (Introduction, p. 178 ff.). Since, however, M. also had claims as the prophet of D., H.'s tradition is clearly an attempt to reconcile the claims of the two.

παρὰ Κάδμου τε τοῦ Τυρίου ... ἐς τὴν νῦν Βοιωτίην καλεομένην χώρην : The Cadmus problem, like that of the Pelasgians (II, 51), is one where evidence is so defective that no definitive solution is possible. The most we can do is to suggest the terms within which the problem should be posed, offering a model answer to illustrate the relevant principles. The data are as follows :

1. The legend. This is already fully developed in H. (II, 49, 145; IV, 147; V, 57-9). C. was the son of Agenor and brother of Europē. When the latter was abducted by Zeus, C., with his mother Telephassa, wandered in search of her throughout the E. Mediterranean and Aegean Sea. His mother died in Thrace and he subsequently received an oracle that he was to follow a cow with moon-shaped markings upon it and found a city where it stopped. When, at last, he reached that point, he slew the dragon guarding a sacred spring of Ares and, at the behest of Athene, sowed its teeth in the ground. Immediately up sprang the *Σπαρτοί* who fought together until only 5 remained. These became the ancestors of the Theban people. To expiate the crime of killing the snake C. became Ares' slave for 8 years after which he was given the god's daughter Harmoniē to wife. Before his death he and Harmoniē left Thebes and travelled to Illyria where further adventures and heroization awaited them (Fontenrose, *Python*, p. 306 ff.; Vian, *Les Origines de Thèbes*, passim). In this legend he figures entirely as a *ἥρως*.

2. Information on the Cabiri with whom C. is connected. They are deities of the animistic stratum of Gk. Religion who are found in Asia Minor, the Islands and on the Gk. mainland (n. II, 51). Normally they are 3 in number—God, Goddess and Son, the two males being much the most important, and tend to function as a group of protective spirits active in all branches of human endeavour (Hemberg, *Die Kabiren*, p. 283 ff.). The Child tends to predominate. He was worshipped under the name Casmilus/Cadmilus in Samothrace, Imbros and Lesbos (Hemberg, op. cit., pp. 95, 129; Vian, op. cit., p. 154). On Samothrace he is said to have founded the race of Saon, on Lemnos that of the three Cabiri (Vian, l.c.). In Thebes, typically, the central figures were the father *Κάβιρος* and the son *Πάϊς* or *Πάϊς Καβιρώ*, the latter being particularly popular. He was also known under the name of Cadmus (Hemberg, op. cit., p. 129). The Goddess was called Demeter Kabeiraia in classical times but earlier was possibly named *Καβιρώ* (Hemberg, op. cit., pp. 192 ff., 279).

3. Linguistic evidence. This is often a broken reed and useless without controls but the following points are possibly relevant :

(a) *Κάδμος* is used in Crete of hoplite kit (Hsch., s.v. *κάδμος*).
(b) There was a mountain in Caria calles *Κάδμος* (Fick, *Vorgriechische Ortsnamen*, p. 135).
(c) *Κεκάσθαι* "equip oneself" may be cognate with (a) (Vian, op. cit., p. 156 ff.; Frisk, *Griechisches etymologisches Wörterbuch*, I, p. 811 ff.).

4. Representations. Two points are interesting (Vian, op. cit., p. 35 ff.):

(a) C. is invariably represented as a heroic traveller.
(b) The contest with the dragon is almost the only theme exploited.

5. Archaeology :

(a) Early history of Thebes. It was occupied during the E.H. Period, began to grow c. 1600 B.C. and reached its zenith in the 14th-13th Centuries (Cloché, *Thèbes*, p. 12 ff.; Vian, op. cit., p. 229 ff.; Kirsten-Kraiker, *Griechenlandkunde*^{5}, II, p. 823 ff.; *AR* 1963-1970).
(b) On the Cadmeia a large hoard of N.E. cylinder-seals was found in a Myc. context (Touloupa, *Kadmos* 3 (1964), p. 25 ff.; Daux, *BCH* 88 (1964), p. 775 ff.) which v. Geisau (*KP* III, 41) and Kirsten-Kraiker (op. cit., II, p. 246) enthusiastically hail as evidence of strong oriental influence confirming the Cadmus tradition.
(c) The temple of the Cabiri lay c. 5 kms from Thebes but, since it stood between Thebes itself, Onchestus and Thespiae, it may well have been originally independent of all three. The earliest shrine is Geometric, though the first mention of the Cabiri only dates c. 500 B.C. The cult centre was, however, of great antiquity (Hemberg, op. cit., p. 188 ff.; Vian, op. cit., p. 64 ff.; Nilsson, op. cit., p. 671 ff.).

In 1 and 4 we find C. as *ἥρως*, in 2 as a *θεός*. It seems reasonable to assume that the *ἥρως* developed from the *θεός*. Such a relationship we should expect to arise from humanization of the god. To explain such an evolution we must determine the mythological rôle of C. at Thebes but to establish that, in the absence of clear statements, we must fall back on an analysis of data 1 and 4.

In the legend the key rôle of C. is that he founds Thebes after a struggle against the dragon and establishes many cults. This harmonizes with information about Casmilus on Samothrace and Lemnos where he was also a founder, both of a Cabiri cult and of a nation. Data 3(a) and (c) suggest that he was distinguished by martial qualities. Thus, it seems reasonable to suggest that C.-θεός at Thebes was the champion of the Cabiri. May we not go a little further? Since Casmilus is a founder-god, C. may be one also. He could have been regarded as the founder of the *Kabirenheiligtum*, and this act could have been expressed in mythological terms as the slaying of the dragon (cf. Apollo's triumphant battle with Pytho at Delphi—Fontenrose, op. cit., p. 306 ff.). The implication of such a myth is, of course, that order has triumphed over chaos and that a new era has dawned. It seems likely that Thebes, at an early date, took over the *Kabeirion* as one of its cult centres (5(c)). If so, this act will have required a mythological expression. What better way of doing this than to marry the young, martial founder of the cult to Harmoniē, an old denizen of Thebes, who has been well described as "die Schutzgöttin des bürgerlichen Verbandes" (Preller-Robert, *GrM* I, p. 378; Vian, op. cit., p. 142)? This seems a reasonable, though speculative, reconstruction of the myth of Cadmus-θεός. It is from some such a basis as this that C.-ἥρως began to evolve.

As a warrior youth, founder of the *Kabeirion*, champion of order and husband of Harmoniē, C.-θεός must have had considerable imaginative appeal. This, under the influence of anthropomorphization with its impulse to clarity, would tend to demythologize and transmute myth into saga or legend, a process admirably seen in the case of Dionysus who, in the Hellenistic Period, becomes little more than a culture-hero in some quarters. C.-θεός, the founder of the *Kabeirion*, becomes C.-ἥρως, founder of Thebes. His conquest of the dragon becomes a preliminary to this act and the marriage of Harmoniē, under the influence of folk-tale (Bride-Wager Motif, Introduction, p. 102), becomes the reward and consummation of his striving. This rôle, in turn, leaves abundant opportunities for him to become the bringer of civilization and all its blessings.

This relatively simple, schematized picture was rendered much more complicated by two things :

1. There were other deities in Thebes with whom C.-θεός would necessarily enter into mythological connections, once established there, e.g. Demeter, Aphrodite, Athene to name only the most prominent (Vian, op. cit., p. 134 ff.).
2. C.-θεός and C.-ἥρως would have a tendency to contaminate one another.

The first point is particularly important because, through Demeter C.-θεός and, by association, C.-ἥρως became entangled in the Demeter/Korē religion (Hemberg, op. cit., p. 192). This trait, transferred to the legend, is probably the basis of the journey of C. in search of Europē who is probably identical with Korē herself (Gruppe, *Cadmi Fabula*, p. 4 ff.; Fontenrose, op. cit., p. 306 ff.; Vian, op. cit., p. 135 ff.). It will also explain why the marriage of Harmoniē and C. can assume the form of a ἱερὸς γάμος on Samothrace (cf. Hemberg, op. cit., p. 104). Finally, it allows us to identify C.'s mother Telephassa as a form of Demeter (Fontenrose, op. cit., p. 368 ff.; Vian, op. cit., pp. 106 ff., 135 ff.).

How do we explain the Phoenician C. against this background? That this aspect is secondary is quite certain (Gomme, *JHS* 33 (1913), pp. 53 ff., 223 ff.; Vian, op. cit., p. 54) :

1. It is unknown before H.
2. The kernel of the C. legend is firmly rooted in the foundation of the Cadmeia.

Pace v. Geisau (l.c.) and Kirsten-Kraiker (l.c.), the seal cache (Datum 5(a)) cannot be used as evidence of strong oriental influence substantiating the N.E. origin of C. :

1. One cache cannot prove anything of the sort.
2. It is a group of heterogeneous seals of differing date and provenance which may easily be nothing more than a body of objects collected for their amuletic or curiosity value.

Several factors may have helped to give C. a Phoenician veneer :

1. C., through his connection with Europē, could be regarded as much travelled.
2. The father of Europē was called Phoenix (*Il* XIV, 321; Vian, op. cit., p. 56 ff.).
3. C. was a founder of cults and, as such, a bringer of civilization and order.
4. The founder would be thought to derive from some place other than the spot where his foundation is made.
5. The Phoenicians are depicted as engaged in widespread trading activities from the time of Hom.

6. The Phoenicians were responsible for the Gk. alphabet (Woodhead, *The Study of Gk. Inscriptions*, p. 12 ff.).

7. During the Orientalizing Period N.E. influence was strong in Greece, passing largely through Syria (Introduction, p. 10 ff.).

8. The Gks. were convinced of the foreign origin of much Gk. *Kulturgut* (Introduction, p. 49 ff.).

9. There is evidence of the migration of Thebans to the islands and Asia Minor after the collapse of Myc. Civilization (Vian, op. cit., p. 57 ff.).

1 and 2 would bring together C., Europē and Phoenix (a process which would have been particularly easy in Miletus—Vian, op. cit., p. 57 ff.) and that would connect C. with the eponymous ancestor of the Phoenicians. 3-8 would strengthen and elaborate the tradition. The descendants of the Thebans mentioned in 9 would have been regarded and would have regarded themselves as colonists left by C. Finally, Tyre, as the most important Phoenician city, would be C.'s obvious home.

The connection with Illyria arose by similar means. There were cultural and ethnic affinities between Boeotia and Illyria which needed explaining. If the Phoenician origin of C. were established first—and it may well have been—the departure of C. from Thebes before his translation to higher things would be an obvious way of doing it (cf. Vian, op. cit., p. 124 ff.).

To conclude, H.'s C. is, in origin, a Boeotian god, the *Πάϊς* of the Theban *Kabeirion*. His myth was slowly turned into saga and with this development a C.-ἥρως evolved who figured as the founder of the city of Thebes. The connection with Phoenicia is quite secondary and has little historical validity—at the most only reflecting in a general way the cultural contact between the N.E. and Greece during the Orientalizing and Archaic Periods.

Bibliography : Heydemann, *AZ* 29 (1872), p. 35 ff.; Bethe, *Thebanische Heldenlieder*, p. 76 ff.; Gruppe, *De Cadmi Fabula*, passim; Crusius, ap Roscher, *ML* II, 824 ff.; Gomme, *JHS* 33 (1913), pp. 53 ff., 223 ff.; Latte, *RE* X, 1640 ff.; Dumézil, *JA* 215 (1929), p. 253 ff.; Wolters-Bruns, *Das Kabirenheiligtum*, I, passim; Hemberg, *Die Kabiren*, Index, s.v. Theben & Kadmos; Schauenburg, *Gymnasium* 64 (1957), p. 210 ff.; Fontenrose, *Python*, p. 306 ff.; Kerenyi, *Die Heroen*, pp. 31, 35 ff.; Vian, *Les Origines de Thèbes*, passim; Nilsson, *GgrR* I, pp. 21, 671 ff.; Fauth, *KP* III, 34 ff.; v. Geisau, *KP* III, 40 ff.

50. σχεδὸν δὲ καὶ πάντων ... : The climax of the argument which has occupied H. since II, 43 but observe that H. has unsystematically and typically stated his conclusions before all the evidence has been discussed. Ch. 50 belongs logically after Ch. 52.

The names and concepts of the Gk. gods (vide n. II, 43, 2) derive from three sources :

(a) Pelasgian—the Dioscuri, Hera, Histia, Themis, the Charites and the Nereids.
(b) Libyan—Poseidon.
(c) Egyptian—all other gods known to the Greeks.

οἱ Πελασγοί—largely a figment of the Gk. imagination. H.'s conception of the Pelasgians involves the following elements :

I. They had originally occupied the whole of Greece (II, 56, 1; VIII, 44, 2). They include what later became the Ionian people (I, 56, 2) and are mentioned, in particular, as erstwhile inhabitants of Attica (vide infra), Samothrace, Thesprotis, Lemnos, Imbros and Thessaliotis.
II. The Pelasgian people did not become numerous and had in most cases been assimilated into the *Ἑλληνικὸν ἔθνος* (I, 58) which originated in N. Greece and then moved S. (I, 56, 3). They did, however, survive in the cities of Krēstōn "beyond the Etruscans", Plakiē and Skylakē, both in the Hellespont (I, 57), in Arcadia (I, 146, 1; II, 171, 2-3) and we also hear of *Πελασγοὶ Αἰγιαλέες* in the Hellespont (VII, 94) as well as Aeolian Pelasgians (VII, 95).
III. They have two distinguishing characteristics :
    (a) Their language is barbarian, though largely supplanted by Gk. (I, 57-58).
    (b) They practise strange religious rites (Myres, *JHS* 27 (1907), p. 181).

References to Pelasgians begin in Hom. and abound in later writers, Gk. and Roman (sources Lochner-Hüttenbach, *Die Pelasger*, p. 11 ff.). Much of this tradition is worthless from the strictly historical point of view. As found in H. it is the product of a process of reasoning and inference something like the following :

1. There was a tribe in Thessaly called the *Πελασγοί* (*Il* II, 681; Hec., *FgrH* I, F.14, 133; cf. A., *Supp* 250 ff.). The connection of the Pelasgians with this area is constant and confirmed by the place name *Πελασγιῶτις* (Meyer, *Forschungen*, I, p. 105 ff.; Neumann, *Gnomon* 34 (1962), p. 370 ff.; Myres' scepticism op. cit., p. 188 seems unjustified). This tribe was probably non-Gk. and was certainly so regarded by Hec. (op. cit., F.119). Two facts tend to confirm this :

(a) The P.'s were brigaded with the Trojans (Schachermeyr, *Etruskische Frühgeschichte*, p. 256 ff.; Lochner-Hüttenbach, op. cit., p. 10; Schachermeyr, *RE* XIX, 252 ff.; Meyer, *GdA* I, 2, p. 768; Munro, *JHS* 54 (1934), p. 109 ff.).
(b) *Πελασγιῶτις* abounds in non-Gk. place names and there are 30 un-Gk. phratriae names from Larisa (vide *IG* IX, 2, 524 and in general Neumann, op. cit.).

2. Gks. and Gk. came into existence with Hellen, son of Deucalion (cf. Meyer, *Forschungen*, I, p. 114 ff.; id., *GdA* I, 2, p. 769; Schachermeyr, *Etruskische Frühgeschichte*, p. 259). Therefore, the *λογογράφοι* were compelled to find the pre-*Hellenic* inhabitants of Greece. The presence of non-Gk. Pelasgians in the *Il* (vide supra) suggested the answer—at one time all Greece was inhabited by such people (*FgrH* I, F.14, 119, 127, 133 show that at least one logographer had identified Pelasgians throughout Greece).

3. Pelasgians were considered to survive in the 5th Century

(a) Wherever a portion of the Gk. population had established a recognized claim to being autochthonous e.g. Athens (H. I, 146 ff.; Th., I, 2, 5 ff.) and Arcadia (*Προσελῆναῖοι* *LSJ* p. 1508,b; H., VIII, 73, 1; Schachermeyr, op. cit., p. 259 ff.; note also that the Arcadian dialect was quite distinctive and of great antiquity (Chadwick, *CAH* II, Ch. XXXIX, fasc. 1, p. 9) and that even Macedonian could be regarded as a barbarian language (Gomme, *HCT* I, p. 95, n. 2)). In such cases the old Pelasgian language was considered to have been abandoned (cf. I, 57, 3) in favour of Gk.
(b) Where non-Gk. languages were spoken within the Gk. *Kulturgebiet* e.g. Lemnian—a relative of Etruscan (*IG* XII, 8, p. 7; Della Seta, "Iscrizioni tirreniche di Lemno", *Scritti in onore di B. Nogara*;

> Pallottino, *L'Origine degli Etruschi*, p. 68) and Samothracian—possibly Thraco-Phrygian but certainly not a variety of Etruscan (vide infra, p. 241).

In the nature of the evidence it would be possible to interpret the tradition in slightly different ways but the view here propounded must be basically correct. As for the ethnic affinities of the Pelasgians of Thessaly, these are not clear and are likely to remain so; for the linguistic material from the area, the only evidence available, is too limited to solve the problem, though it will doubtless continue to serve as the basis of ingenious if unprovable hypotheses (cf. Lochner-Hüttenbach's Illyrian Pelasgians (op. cit.) with Neumann's pertinent criticisms (op. cit.). The nihilism of Hester (*Minos* 9 (1968), p. 228 ff.) is refreshing).

This exposition makes it clear that to H. the Pelasgians were pre-Dorian and non-Gk. inhabitants of Greece and that the names of the gods mentioned are considered pre-Dorian and non-Greek.

Bibliography: Meyer, *Forschungen*, I, p. 6 ff.; Myres, *JHS* 27 (1907), p. 170 ff; Meyer, *GdA* I, 2, p. 767 ff.; Schachermeyr, *Etruskische Frühgeschichte*, Ch. 6 passim; Munro, *JHS* 54 (1934), p. 109 ff.; Schachermeyr, *RE* XIX, 252 ff.; Bérard, *REA* 51 (1949), p. 201 ff.; Myres, *Historia Mundi*, II, p. 476; Lochner-Hüttenbach, *Die Pelasger*, passim; Neumann, *Gnomon* 34 (1962), p. 370 ff.

οἱ Διόσκοροι : The name first occurs on an early Archaic inscription from Thera (*IG* XII, 3, 359) and is obviously Gk. They are also called *Tyndaridae* "Sons of Tyndarus". They retain intimate contacts with the animistic stratum of Gk. Religion from which they spring and as such are similar to and often identified with the Curetae, Corybantes, Idaean Dactyls, μεγάλοι θεοί and Cabiri (Paus., III, 24, 5; X, 38, 7; Hemberg, *Die Kabiren*, p. 16 ff.; Nilsson, *GgrR* I, p. 407 ff.), a fact which may explain H.'s insistence that they were Pelasgian in origin (vide supra).

Ἥρη : Feminine of ἥρως, "the Lady". It first occurs in Linear B (Ventris-Chadwick, *Documents*, pp. 126, 169, 289) at a time when Hera was probably a *Palastgöttin*. Her fundamental rôle in classical times is that of wife of Zeus and *the* wife *par excellence*. Her cult is quite rare but there is a concentration in the N. East Peloponnese and particularly in Arcadia (Heraea, Mantinea, Stymphalos and, later, Megalopolis). The fact that Arcadia was a "Pelasgian" area (vide supra, p. 232) may well explain H.'s belief on the origin of the goddess.

Bibliography : Roscher, *Studien z. vergleichenden Myth. der Griechen und Römer. II. Juno und Hera*; id., *ML* I, 2075 ff.; Preller-Robert, *GrM* I, p. 160 ff.; Farnell, *CGS* I, p, 179 ff.; Gruppe, *Gr. Myth.*, p. 1121 ff.; Eitrem, *RE* VIII, 369 ff.; Sauer, *KP* II, 1028 ff.; Roloff-Huber, *Artemis Lexikon*, 1254 ff.; Nilsson, *GgrR* I, p. 427 ff.

Ἱστίη : Etymology sought in several Indo-Germanic roots—Sansk. *vas-* "bright, shining" (Sikes, *HERE* VI, 562 ff.) and Indo-Germ. *u̯es-* "stay, dwell" cf. *ἄστυ, Ϝαστυ* (Walde, *Vergleichendes Wörterbuch der Indogermanischen Sprachen*, I, p. 306 ff.). Goddess of the Hearth, whether of the family or the state, her Gk. origins are beyond doubt (Frazer *JPh* 14 (1885), p. 145 ff.; Farnell, *CGS* V, p. 347; Meyer, *GdA* II, p. 223; Nilsson, op. cit., p. 337) but her inclusion amongst Pelasgian deities might arise from several factors :

(a) She is a nebulous deity very rarely represented anthropomorphically and never fully personified (Farnell, op. cit., p. 345; Sikes, op. cit., 563; Nilsson, op. cit., pp. 78, 338). This would harmonize with H.'s account of the Pelasgian *Götterwelt* ap II, 52, 1.
(b) Hestia took precedence over other gods in the sacrificial meal (Paus., V, 14, 4; Farnell, op. cit., p. 346; Nilsson, op. cit., p. 338). This might have been understood to imply historical priority.
(c) There is an area in Thessaly called Histiaeotis. Fick (*Vorgriechische Ortsnamen*, p. 156) derives this name from Histia and Thessaly was particularly associated with the Pelasgians (vide supra, p. 233).

Bibliography : In addition to works quoted see Süß, *RE* VIII, 1257 ff.; Preuner, *Hestia-Vesta*, passim; id., ap Roscher, *ML* I, 2605 ff.; Wilamowitz, *Der Glaube*, I, p. 152 ff.; Fauth, *KP* II, 1118.

Θέμις : The name is obviously Gk. Daughter of Uranus and Gē (Hes., *Th* 135; D.S., V, 66; Apollod., I, 1, 3); mother of the Hōrae and protector of order and the laws of hospitality, the name thus common as an abstract noun (*LSJ* p. 789, a, s.v. *θέμις*). The claim that she was Pelasgian may be explained in several ways :

(a) In the 5th Century B.C. it was asserted that she preceded Apollo as the oracular god at Delphi (Parke-Wormell, *Delphic Oracle*, I, pp. 11, 19 ff.; Latte, *RE* VA, 2, 1626 ff.; Nilsson, op. cit., p. 171 ff.). According to the views expressed ap II, 52, Apollo's name came from Egypt. This might suggest that Themis' name dated from the Pelasgian period.

(b) Themis was identified with Gē (A., *Pr* 209 ff.) and would thus be one of the earliest deities in the Gk. Pantheon.

(c) Themis was the mother of the Hōrae who are often identified with the *Χάριτες*. If the *Χάριτες*' name is Pelasgian (vide infra), it could be argued that that of Themis was also.

(d) Cult centres of Themis are well known in Thessaly (the Pelasgian homeland, vide supra, p. 233) but are extremely rare elsewhere. The cult of Themis may well have originated there (Wilamowitz, *Der Glaube*, I, p. 207; Latte, op. cit., 1629 ff.).

Bibliography : In addition to works quoted see Schubert, *Artemis Lexikon*, 3040; Weniger, ap Roscher *ML* V 570 ff.

Χάριτες : "Gift-" or "Grace Givers" (Harrison, *Themis*, p. 185; Escher, *RE* III, 2150). Originally two, later three, the *Χάριτες* always remained deeply rooted in the animistic stratum of Gk. Religion. They were spirits embodying the blessings of the earth (Persson, *Rel. of Greece in Prehistoric Times*, p. 152; Rose, *Handbook of Greek Mythology*, p. 124; Escher, op. cit., 2160 ff.), and as such they often have plant-attributes (Paus., VI, 24, 6; Thasos Relief ap Michaelis, *AZ* 25 (1867), p. 2 ff.) as well as close affinities with the chthonic gods (Zielinski, *CQ* 18 (1924), p. 158 ff.). H. may have regarded them as Pelasgian for several reasons :

1. They enjoyed a famous cult at Minyan Orchomenus where they were worshipped as three aniconic black meteoric stones (Pi., *O* XIV, 1 ff.; Paus., IX, 38, 1; Escher, op. cit., 2153 ff.). This primitive cult may have suggested Pelasgian affinities.

2. The personal names of the *Χάριτες* tend to be fluid (Escher, op. cit., 2152 ff.) and such uncertainty might have suggested to H. Pelasgian affinities (II, 52, 1).

Bibliography : In addition to that quoted see Fauth, *KP* I, 1135 ff.; Stoll-Furtwängler ap Roscher, *ML* I, 873 ff.; Preller-Robert, *GrM* I, p. 481 ff.; Harrison, *Prolegomena*, Index, s.v. Charites; Usener, *Götternamen*, p. 131 ff.; Krappe, *REG* 45 (1932), p. 155 ff.

Νηρηίδες : From Indo-Germanic root *snā*-"to flow, moisture"—**σνāϜ -ερο-* (Walde, *Vergleichendes Wörterbuch der Indogermanischen Sprachen*, II, p. 692 ff.; cf., however, Frisk, *Griechisches etymologisches Wörterbuch*, II, p. 315 ff.). Female sea-sprites of the animistic stratum, numbering between 50-100 and representing the sea in all its moods and aspects (Weizsäcker ap Roscher, *ML* III, 207 ff.; Herzog-Hauser, *RE* XVII, 1 ff.; Sichtermann, *EAA* V, p. 421 ff.). In modern Greece the word *νεράϊδα* (Pring, *ODMG* p. 128) is used to refer to a wide variety of nature spirits (Nilsson, op. cit., p. 252 ff.; Weizsäcker, op. cit., 237 ff.; Herzog-Hauser, op. cit., 10 ff.).

The Nereids are not regarded as Pelasgian *qua* Nymphs as we might expect; for H. singles them out from other classes. They are regarded as Pelasgian because they are sea deities which, H. implies (II, 43, 2), were unknown to the Egs. Since, with the sole exception of Poseidon (vide (b) infra), all Gk. deities were Pelasgian or Eg., the Nereids must be Pelasgian. It should further be pointed out that the Nereids had an important cult at C. Sepias in Thessaly (H., VII, 191, 2; Herzog-Hauser, op. cit., 10).

τοῦτον δὲ τὸν ϑεὸν ... τιμῶσι τὸν ϑεὸν τοῦτον αἰεί : Cf. IV, 180, 188. *Ποσειδῶν* generally (e.g. Schachermeyr, *Poseidon*, p. 13 ff.), though not universally (e.g. Nilsson, op. cit., p. 445) explained as *πόσις* + *δᾶ* "Spouse of the Earth"; according to H. one of several Libyan contributions to Gk. Civilization (cf. IV, 189). The statement is astounding; for his Indo-European/Gk. provenance is beyond doubt and the date of his introduction into Greece at least Achaean (Ventris-Chadwick, *Documents*, Index, s.v. "Poseidon"; Schachermeyr, op. cit., p. 11 ff.; Nilsson, op. cit., p. 444; Bulle ap Roscher, *ML* III, 2789 ff.; Gsell, *Hérodote*, p. 160).

In classical times the god was worshipped widely in N. Africa (Wüst, *RE* XXII, 1, 446 ff.; Vitali, *Fonti per la Storia della Religione Cirenaica*, p. 96 ff.). His wife is Libya in some legends. He was claimed to be the ancestor of the Battiads (Hes., F. 253 (Merkelbach-West); Pi., *P* IV, 33, 45) and his son Antaeus is often represented as a Libyan king massacring strangers (Chamoux, *Cyrène*, p. 281). In this context we should remember that there is evidence of Poseidon's cult at Thera (Vitali, op. cit., p. 144).

Since the cult of Poseidon in Africa cannot be much earlier than the 8th Century, H.'s statement must mean that the Gk. god had been identified with an earlier native deity but pinning this precursor down has proved difficult. To start from first principles. Such a god must be connected with water, earthquakes or horses or any combination of the three and on that basis the following solutions suggest themselves :

(a) A Phoenician god. The Phoenicians had been operating in N. Africa since the 9th Century (Introduction, p. 11 ff.) and several of their gods were identified with Poseidon (Gsell, *L'Afrique du Nord*, IV, p. 336 ff.). Movers saw one of these Phoenician gods as the pre-Gk. deity in question (*Die Phönizier*, II, 2, p. 468).

(b) A Libyan god. Spring spirits have been worshipped from time immemorial by the tribes of N. Africa and there are known from the Roman Period many dedications *genio fluminis* or *genio fontis* in W. Libya (*CIL* VIII, 2662-3, 5884; in general Toutain, *Les Cultes Païens dans l'Empire Romain*, III, p. 40 ff.). Their modern descendants claim that the *ginn* in question can emerge from the waters as *horses*, goats, asses and other animals (Bates, *The Eastern Libyans*, p. 172 ff.).

Clearly the evidence is very much in favour of a Libyan deity.

We can now proceed to explain H.'s statement along the following lines :

1. Either Gk. traders or the Theran colonists of Cyrene brought the Gk. Poseidon to N. Africa in the 8th-7th Century B.C. He was identified with a Libyan god of similar nature and his N. African cult acquired thereby a borrowed air of immemorial antiquity.

2. H., with his general disposition to the *post hoc ergo propter hoc* fallacy, heard of this extremely ancient Poseidon whose antecedents appeared to be older than the earliest traces available to him of Poseidon in Greece (Homeric *ergo* 8th Century?) and assumed that the Gks. had acquired the god from N. Africa.

νομίζουσι δ'ὤν Αἰγύπτιοι οὐδ'ἥρωσι οὐδέν : At first surprising but a matter of definitions. The Egs. certainly deified men who had made conspicuous contributions to Eg. Civilization (e.g. Imḥotep, Amenḥotpe son of Ḥapu, Senwosret III and possibly Osiris) or else had been sanctified in their death (e.g. by drowning —cf. n. II, 90) but these men always became gods (*nṯrw*), though retaining traces of their earthly origins (complete list Rowe, *ASAE* 40 (1940), pp. 1 ff., 291 ff.). To a 5th Century

Gk., however, the ἥρωες were an intermediate stage between men and gods, a body of great figures who, for their achievements, had been vouchsafed a station above that of ordinary mortals but they were not θεοί (Guthrie, *The Greeks and their Gods*, p. 231 ff.). When H. denies the existence in Egypt of ἥρωες in this sense, he is, in fact, quite correct (Sethe, *HERE* VI, p. 647 ff.; Otto, *ZÄS* 78 (1943), p. 28 ff.; Bonnet, *RÄRG* p. 856). It should further be noted that the martial and virile characteristics of Gk. ἥρωες are generally lacking in Eg. heroes who tend to be scholars, wise men or magicians of outstanding ability. Such a difference in attitude is, of course, indicative of a fundamental difference of ethos between the cultures of Ancient Greece and Ancient Egypt (Otto, op. cit., p. 28 ff.).

51. τοῦ δὲ Ἑρμέω τὰ ἀγάλματα ... οὐκ ἀπ' Αἰγυπτίων μεμαθήκασι : i.e. the Gks. are not imitating the ithyphallic Osiris mentioned II, 48, 2-3. This statement is the first written evidence of the Herm cult (Crome, *MDAI(A)* 60/1 (1935/6), p. 309). The origin of the ithyphallic Herm considerably perplexed the ancients who regarded it as of great antiquity (cf. Xanth., *FgrH* 765, F.29; Anticl., ib., 140, F.19; Corn., *ND* 16; Plu., *Mor* 797; Serv. ad Verg., *Aen* VIII, 138; Fest., s.v. Cyllenius; Macr., *Sat* I, 19). In fact, although Hermes is of Arcadian origin (Nilsson, *GgrR* I, p. 502 ff.), the canonical ithyphallic Herm with archaic head appears to be Athenian. Its history runs as follows (Crome, op. cit., p. 300 ff.) :

1. The first Herms of the type in question were erected by Hippias as milestones in memory of his brother (Schweitzer, *MDAI(R)* 44 (1929), p. 7; Lullies, *Die Typen der griechischen Herme*, p. 34 ff.). Hermes was the ideal choice because he was the protector of travellers while the ithyphallic element expressed his rôle as a fertility god, fructifier of sheep (for which see Nilsson, op. cit., p. 505 ff.), particularly apt for monuments placed in country districts.
2. From c. 500 B.C. the Herm is divorced from its function as a milestone and is generally used as an *anbetungswürdiges Bild.* Here the phallus' association with good luck and its function as protector against evil are important (Nilsson, *Gr. Feste*, p. 390, n. 5; Eitrem, *RE* VIII, 766 ff.).

In archaic and early classical times the Herm is exclusively ithyphallic, in the earlier examples sometimes prodigiously so (Nilsson, l.c.;

Buschor, *MDAI(A)* 53 (1928), p. 107; Eitrem, op. cit., 697 ff.; Lullies, op. cit., p. 46, with pls. 2, 1-2; 3, 1-2; 4, 1-2; 5, 1-2; 7, 1; 8, 1-2) but non-ithyphallic examples occur as early as the end of the 5th Century. At Athens Herms could be found in the agora (And., *De Myst* 62), before the doors of houses (Th., VI, 27), on boundaries, at city and town gates and in markets, gymnasia and palaestra (Eitrem, l.c.). Until the 4th Century they always represented Hermes but subsequently Herms of Pan, the Satyrs, Priapus, Aphrodite, Hekate and Helios also occur (Lullies, op. cit., p. 85).

Bibliography : Apart from works quoted vide Curtius, *Die antike Herme*; Scherer ap Roscher, *ML* I, 2342 ff.; Mingazzini, *EAA* III, p. 420 ff.

πρῶτοι μὲν Ἑλλήνων ... νομισθῆναι : H. had at his disposal two traditions on the Pelasgians in Attica :

1. The Athenians, as *αὐτόχθονες,* were themselves members of the hypothetical Pelasgian substratum—*Ἀθηναίοισι ἤδη τηνικαῦτα ἐς Ἕλληνας τελέουσι* (cf. VIII, 44; n. II, 50, 2).
2. A group of Pelasgians had taken up residence in Attica amongst the Athenians. There they built the *Πελαργικόν,* were rewarded with lands on Mt. Hymettus and later driven out to the N.E. (cf. VI, 137 ff.).

These divergent views were encouraged by two things : (a) the name *τὸ Πελαργικόν* given to the old Mycenaean wall on the Acropolis; (b) traditions of pre-Gk. people such as the *Μύρμηκες* on Mt. Hymettus (Schachermeyr, *Etruskische Frühgeschichte,* p. 254). H. has tried here to reconcile the two separate accounts as best he can but his embarrassment is all too obvious in *Ἀθηναίοισι γὰρ ... νομισθῆναι.* The tradition of the Pelasgian colony itself is a relatively late fabrication with little basis in the early history of Attica (Meyer, *Forschungen,* I, p. 8 ff.; Bérard's hypothesis of an Etruscan settlement (*REA* 51 (1949), p. 244) is lacking in all proof and intrinsically unlikely to boot). Its genesis can be explained by some such process as the following. There was a tradition of a pre-Gk. population viz. the *Μύρμηκες* etc. in Attica. These, under the influence of 5th Century theorizing, would inevitably be transmuted into Pelasgians (n. II, 50). For those who did not accept tradition 1 on "Pelasgian" Attica the problem arose of determining where they had gone. Lemnos presented itself as the perfect solution. According to Gk.

legend the Minyans had been driven from there two generations after the Argonautica (Pi., *P* IV; H., IV, 145). Furthermore, there was spoken on Lemnos a non-Gk. language related to Etruscan (cf. Th., IV, 109)—and non-Gk. languages occurring within the Gk. world were regarded in the 5th Century as a sure sign of the Pelasgians (vide supra, p. 232 ff.). Nothing could be easier, therefore, than to connect the expulsion of the Minyans with the arrival of refugee Pelasgians from Attica. This development was, however, almost certainly promoted by a further consideration viz. the influence of a propaganda campaign to justify the treatment meted out to Lemnos by Miltiades. The propagandists knew of barbarian raids, probably Etruscan (cf. Hom., *hBacch* 8 : Schachermeyr, op. cit., p. 267 ff.), upon the coast of Attica, developed the legend of the Pelasgian/Lemnian rape of the women of Brauron and justified Miltiades' actions as vengeance for past injuries (VI, 136, 2; 138 ff.). As for Samothrace, not only did it harbour a non-Gk. language but also strange religious rites both of which were regarded in the 5th Century as evidence of Pelasgian affinities (vide supra, p. 232 ff). Therefore, it too received a refugee Pelasgian population in the same movement (II, 51, 3), as did Pelasgian-speaking Plakiē and Skylakē (I, 57, 2). Further details ap Meyer, op. cit., I, p. 6 ff.; Schachermeyr, op. cit., p. 253 ff.

Παρὰ δὲ τούτων ὧλλοι : It is likely that H. is correct when he regards Athens as the centre and starting point of the Herm-cult (Crome, op. cit., p. 300 ff.) :

1. The importance of Athens in the Herm-cult is emphasized by several authors (Th., VI, 27; Paus., I, 24, 3).
2. Lexicographers only know of Attic Herms.
3. A large number of Herms survives from Attica as well as many representations on Athenian vase paintings (Mingazzini, l.c.).

Καβείρων : The distribution of Cabiri cults is severely limited (Hemberg, *Die Kabiren*, p. 132 ff.). They belong, like the Corybantes, Satyrs and Dioscuri, to the animistic stratum of Gk. religion and consisted normally of a pair of male gods, an older and a younger, one of whom, usually the elder, was called Cabirus (Hemberg, op. cit., p. 261 ff.). *Pace* H. they were not worshipped on Samothrace where the name never occurs in inscriptions. H., or his source, has confused them with the closely similar *Μεγάλοι Θεοί* or *Σαμοθρᾴκες θεοί*. These were originally two males, later two pairs, one male, one female, and it was with the elder of the males that ithyphallic Hermes was identified (Hemberg, op. cit., pp. 49 ff., 92 ff.). This cult, renowned as early as the 7th Century, reached the zenith of its popularity in the 2nd Century B.C. under the aegis of the Ptolemies (Hemberg, op. cit., p. 64 ff.).

τὰ ὄργια : The centre for the *ὄργια/μυστήρια* was the Anaktoron. Probably from the 5th Century the influence of the Eleusinian Mysteries was considerable and in the following century we encounter a *Brautraub*, *ζήτησις* and a *ἱερὸς γάμος*. Rituals of expiation had to be performed and the mysteries were associated with ecstatic rites. It is probable that they guaranteed a better lot in the next world (Hemberg, op. cit., p. 104 ff.).

παρὰ Πελασγῶν : The *Urgeschichte* of the *Μεγάλοι Θεοί* on Samothrace can be plotted with some degree of confidence and reveals two strata :

1. The kernel is an animistic cult probably of great antiquity :

(a) The temple at Samothrace lay some distance from the city.
(b) The cult place has probable pre-Gk. remains.
(c) Slaves were admitted to the mysteries, a fact suggesting that the cult was that of a pre-Gk. subject people.

2. Asiatic influences were added :

(a) The concept of two male gods is paralleled by Hittite Myth (Goetze, *Kleinasien*, p. 130 ff.).
(b) The attributes of the Samothracian gods are paralleled by those of Hittite weather gods (cf. Bossert, *Altanatolien*, p. 52, pl. 99, no. 474; 100 ff., no. 476-480).

H.'s insistence that the Samothracian gods were Pelasgian can be explained by various factors :

1. The primitive character of the cult.
2. The existence on Samothrace into classical times of a non-Gk.,

possibly Thraco-Phrygian, linguistic stratum (Lehmann, *Samothrace*, 2, II. *The Inscriptions on Ceramics and Minor Objects*, p. 8 ff.).

3. The tradition of Pelasgians on Lemnos; for Lemnos was a great centre of the worship of the *Κάβειροι* and also had a non-Gk. linguistic stratum. Thus, H. might naturally extend the diffusion of the Attic Pelasgians to Samothrace (vide supra, p. 241).

τὴν γὰρ Σαμοϑρηίκην οἴκεον ... σύνοικοι ἐγένοντο : Ambiguous. *Πρότερον* could mean :

(a) Before H.'s time.
(b) The P.'s lived in Samothrace before coming to Athens.

The subsequent flight N.E.-wards of these *σύνοικοι* makes it probable that (a) is correct (cf. Bérard, op. cit., p. 238 ff.).

οἱ δὲ Πελασγοὶ ... δεδήλωται : The *λόγος* designed to explain the ithyphallic nature of the god will have been connected with the *ἱερὸς γάμος*. In the Anaktoron objects looking like *cunni* or *φαλλοί* were found (Lehmann-Hartleben, *AJA* 43 (1939), p. 140; id., ib. 44 (1940), p. 355; cf. Dornseiff, *Das Alphabet in Mystik und Magie*, p. 21 ff.) and the brazen boxes unearthed during the excavations may have contained ritual *φαλλοί* (Lehmann-Hartleben, *AJA* 44 (1940), p. 349, fig. 28). For phallic rites in Samothrace see De Jong, *Das antike Mysterienwesen*^{2}, p. 78.

52. ἔϑυον δὲ πάντα ... οὐδενὶ αὐτῶν : To the Gks. the development of religious institutions was an integral part of the development of society (cf. Pl., *Cra* 400d). H.'s theological scheme, i.e his attempt to systematize and explain his data on Gk. religion, appears to be original, though well within the spirit of the age. He is the heir to two traditions :

1. The theogonic tradition, pre-eminently Hes., whose *Θεογονίη*, at the threshold of Gk. literature, is an attempt to systematize current beliefs and make a consistent rational synthesis (vide II, 53, 2-3).

2. 5th Century rationalism. This was important in two ways. In the first place it practised the searching analysis of religious traditions and their origins (Xenoph. (*DK* 21, B11-16 ~ *KR* 169-172); Prodic. (*DK* 84,

B5) and Democr. (*DK* 68, B30)). Secondly, it produced evolutionary theories of society (e.g. Protag. (Pl., *Prot* 322a; Jäger, *Theology*, p. 174 ff.), Critias (*DK* 88, B25; Jäger, op. cit., p. 186 ff.) and Democr. (*DK* 68, B30; Jäger, op. cit., p. 183 ff.)) and biology (e.g. Anaximand. (*KR* 136-140) and Xenoph. (*KR* 184-188)) and under their influence H. is able to see the development of Gk. religion in an historical perspective. He is clearly convinced that Gk. concepts of the gods or religious consciousness have developed in the course of time (cf. Linforth, *UCPCPh* 7 (1924), p. 283 ff.) and isolates 3 phases :

(a) Undifferentiated and unnamed *θεοί* i.e. *θεοί* without *οὐνόματα*, an early prototype of the animistic or pre-animistic theories of primitive religion (on which see Nilsson, *GgrR* I, p. 43 ff.; Evans-Pritchard, *Theories of Primitive Religion*, p. 24 ff.). The origin of H.'s idea may be sought in several directions :

(1) The presence of groups of gods like *οἱ Μεγάλοι Θεοί, οἱ Σαμοθρᾴκες θεοί, οἱ ἄνακες* whose members were only vaguely differentiated, if at all. They were particularly common in what were, to H., Pelasgian contexts e.g. Samothrace where the goddess was addressed in the cult simply as *θεά* or *Μήτηρ* (Hemberg, *Die Kabiren*, pp. 16, 30 ff., 75).

(2) The use of the words *οἱ θεοί, ὁ θεός, τὸ δαιμόνιον, ὁ δαίμων*, without *οὐνόματα*, was not uncommon in earlier times when the worshipper felt a divine power at work which he could not identify (Nilsson, *HGR* p. 105; Ehnmark, *The Idea of God in Homer*, p. 68 ff.; Jones, *CR* 27 (1913), p. 252 ff.). Such expressions were widely current in the 5th Century when the old polytheism was beginning to decline in Greece while at the same time a religious attitude to the world remained strong. They are very common in H. (Linforth, op. cit., ib., 9(7) (1928), p. 218 ff.).

(3) The philosophers were preaching the pantheistic doctrine of an all-pervading divinity without a cult title—a concept doubtless related to 2 above (cf. Jäger, op. cit., p. 172 ff.). H. was certainly acquainted with current philosophical doctrines and may well have been influenced by this development.

(4) The idea of nameless gods may have been suggested by the habit of cosmogonists in creating or identifying divine beings by coining

names for them (cf. Pherecyd. Syr., *KR* p. 54 ff.; Jäger, op. cit., p. 66 ff.).

(5) Myres argued (*JHS* 27 (1907), p. 198) that the idea derived from H.'s experiences at Dodona. The god Zeus was called "Pelasgian" in Homer. The Pelasgians had a different language from the Gks. Therefore, they did not call the god Zeus. No-one at Dodona or elsewhere knew the word for Zeus in Pelasgian. Therefore, there was not one. Therefore, the Pelasgians had no names for the gods.

(b) Names and personalities (*οὐνόματα*) came from Egypt and were applied to the gods by the Pelasgians. This was connected with the introduction of other religious matter e.g. *τῶν ἱρῶν ἡ μαντική* (II, 57, 3), *πανηγύριες* etc. (II, 58) and the Thesmophoria (II, 171). In the time of Cadmus, at a rather later date, the name and cult of Dionysus came to Greece (II, 49).

(c) The *Ἕλληνες* inherited them from the Pelasgians and clearly differentiated them. Hom. and Hes. were responsible for this (n. II, 53).

It should be noted that, for all the rationalism with which Gk. religious history is discussed, H. does not use his evolutionary theory to invalidate religious attitudes to the world. As with most Gk. thinkers of the classical period, for him the existence of the gods was axiomatic (cf. Jäger, op. cit., p. 169 ff.; Linforth, *UCPCPh* 7 (1924), p. 287).

θεοὺς δὲ προσωνόμασάν ... πάσας νομὰς εἶχον : *θεός* is certainly Indo-European though the precise derivation is arguable (Frisk, *Griechisches etymologisches Wörterbuch*, I, p. 662 ff.). Etymologizing was a favourite pastime of the Gks. at which they were ingenious but extremely inept. It occurs even in Hom. and in theology was of great importance from Hes.'s time. "It rests on the assumption that the names of mysterious divine powers, when rightly interpreted, give the key to their nature" (Jäger, op. cit., p. 68 ff.; cf. Warburg, *Neue Philologische Untersuchungen* 5 (1929), p. 65 ff.; Snell ap *Hesiod. Wege der Forschung*, XLIV, p. 721). H.'s etymology may derive from Anaxagoras (Nestle, *Die Verhältnisse*, p. 11). For a similar attempt cf. Pl. (*Cra* 397d) who derives *θεός* from *θεῖν* "to run".

καὶ μετὰ χρόνον ἐχρηστηριάζοντο ... ἐν Δωδώνῃ : Dodona, the site of the famous and ancient oracle of Zeus (vide nn. II, 54-57), lies in an isolated position in the valley of Tcharacovista c. 12 miles from Jannina (Kirsten-Kraiker, *Griechenlandkunde*^{5}, p. 739 ff.). H.'s statement is presumably pure inference on the following lines. Major cult changes are only made with the approval of the gods, usually Delphic Apollo, uttered in oracular form (Parke, *The Oracles of Zeus*, pp. 39, 110, 113, 189). Since the adoption of a name is a major cult change, an oracle was consulted to discover whether the gods approved. Since Dodona was the only oracle in existence (vide infra), the Pelasgians must have consulted Dodona.

τὸ γὰρ δὴ μαντήιον τοῦτο ... μοῦνον : The Pelasgian origin of Dodona is affirmed by A. (*Supp* 249 ff.), Scymn. (*GGM* I, p. 215, 448 ff.), Str. (VII, 7, 10 (C327); IX, 2, 4 (C402)), D.H. (I, 18) and Schol. ad Hom. *Il* XVI, 233. Arist. (*Mete* I, 14 (352a)) claims that it was the cradle of the Gk. people. Pl. (*Phdr* 275b) regarded it as the first oracle. These ideas were probably based on several things :

1. It was the oracular shrine *par excellence* in Hom. (*Il* XVI, 233; *Od* XIV, 327; XIX, 296) and in works drawn from the Epic Cycle (Carapanos, *Dodone et ses Ruines*, p. 129 ff.; Parke, op. cit., p. 12 ff.). The Delphic oracle is mentioned *as such* but once (*Od* VIII, 79).
2. The oracle of Dodona was associated as early as Hom. and Hes. with *Ζεὺς Πελασγικός* (*Il* XVI, 233; Hes. F.240 (Merkelbach-West)). This means to H. and his contemporaries that the cult dates back to the earliest population stratum in Greece. No other Gk. oracle is associated with the Pelasgians.
3. The generally known but not always conceded recent introduction of the oracle of the Delphic Apollo (Parke, *Gk. Oracles*, p. 33 ff.).

The antiquity of the cult of Dodona is beyond all doubt for several reasons :

(1) The primitive nature of early cult practices. The centre of the shrine was a sacred oak and its earliest ministrants, the Selloi/Helloi or Tomouroi, were required to sleep on the ground and avoid washing their feet (Parke, *The Oracles of Zeus*, p. 7 ff.).

(2) The primitive character of the Dodonian Zeus (Nicol, *G & R* 5 (1958), p. 132; vide n. II, 55, 2).
(3) Archaeological evidence suggests that the site was inhabited from the early Bronze Age (Hammond, *Epirus*, pp. 305 ff., 367 ff.; Dakaris, *AK* Beiheft 1 (1963), p. 47 ff.; Parke, op. cit., p. 97 ff.).

ἀνεῖλε ... χρᾶσθαι : *ἀναιρέω* is the standard word for giving oracular responses (*LSJ* p. 106,a, s.v. *ἀναιρέω* III). It probably refers to the use of beans or lots which were "picked up" in the course of prophecy (Amandry, *La Mantique Apollinienne*, p. 33 ff.; Parke-Wormell, *The Delphic Oracle*, I, p. 18 ff.).

53. ὅθεν δὲ ... ὡς εἰπεῖν λόγῳ : H. is the victim of yet another common fallacy of cultural history viz. that the beginning of the evidence for an institution reflects the introduction of the institution. He has no data on *θεογονίη* earlier than Hes. and Hom.; therefore, he assumes that *θεογονίη* began with them.

Ἡσίοδον γὰρ καὶ Ὅμηρον ... καὶ οὐ πλέοσι : The only pronouncement by an important writer of antiquity on the date of Hom. H.'s figure places Hes. and Hom. in the middle of the 9th Century. During the late 5th and 4th Centuries the early poets were grouped in the order Orpheus, Musaeus, Hes. and Hom. (Hippias, *DK* 86, B6; Ar., *Ra* 1032 ff.; Pl., *Ap* 41a: cf. Hellan., *FgrH* 4, F.5; Damastes, op. cit., 5, F.11; Pherecyd., op. cit., 3, F.167; Ephor., op. cit., 70, F.101; Gorg., *DK* 82, B25; Pl., *R* 363a, 377d, 612b). H. apparently regards Hes. and Hom. as contemporaries, as do the ancient lives (Allen, *Homer*, p. 26 ff.; Wilamowitz, *Vitae Homeri et Hesiodi*; Kirk, *The Songs of Homer*, p. 271) though the order in which they are mentioned may reflect knowledge of the tradition mentioned above (Bethe, *Homer*, II, p. 299 ff.; West, *Hesiod. Theogony*, p. 40). Xenoph. considered that Hom. antedated Hes. (*DK* 21, D13) as did Heraclid. Pont. (F.177 (Wehrli)). Absolute dates for both are not uncommon. Hesiod is dated 200 years after the Trojan War by Archemach. (*FgrH* 424, F.3) and Ol. II (736-3) by Tz. (*H* XIII, 643 ff.). Cf. also Jacoby, *Apollodors Chronik*, p. 118 ff.; id., *Das Marmor Parium*, p. 152 ff.; Rohde, *Kl.Schr.*, I, pp. 39 ff., 71 ff.; Rzach, *RE* VIII, 1173 ff. Homer is variously dated by the ancients to the time of the Ionian Colonization, 140 years after the Trojan War (Aristarchus ap *Plutarchi Vita* II, 16-20 (Allen)), c. 1000 B.C. (Plin., *HN* VII, 16; Tz., *H* XIII, 639 ff.), c. 936 B.C. (Parian Marble, *FgrH* 239, F.28), 846-777 (Jacoby, *Apollodors Chronik*, l.c.) and the 10th Century (Eusebius ap Helm, *Die Chronik des Hieronymus*, 77b). Internal evidence generally confirms Tz.'s date for Hes. since it points insistently to the 8th Century (West, op. cit., p. 40 ff.). Homer is more of a problem. Who was he? Did he even exist? If so, what was his date? Arguments are plentiful, ingenious but usually fallacious and any opinion is inevitably held more as an article of faith than anything else. The present writer buttresses his own preconceptions with the following points :

1. Oral poetry and works like the *Il* and *Od* (e.g. *Le Chanson de Roland, Beowulf*) which form the consummation of a long tradition of such work are always anonymous. The fact that the Gk. poems are firmly associated with a figure called Hom. suggests very strongly that (a) Hom. is historical (b) he played a crucial rôle in giving us our *Il* and *Od.*
2. Long, tautly constructed, coherent and apparently definitive poems like the *Il* and *Od* are only comprehensible to the present writer on the assumption that they were composed from traditional epic poetry and written down at a time when the old oral tradition was moribund.
3. Hom. is mentioned by Callinus (early 7th Century) (Paus., IX, 9, 5).

These considerations suggest that Hom. was an ἀοιδός responsible for composing and *writing down* our *Il* and *Od.* This, in turn, gives as his *terminus post* the date of the introduction of writing i.e. c. 750 B.C. (Jeffery, *The Local Scripts*, p. 21). Callinus gives as a *terminus ante* the beginning of the 7th Century. One is tempted to buttress these dates by referring to "Homeric" inscriptions on the Ischia Cup (c. 700 B.C.) (Page, *CR* n.s. 6 (1956), p. 95 ff.) and the rash of "Homeric" scenes on Proto-Argive and Proto-Attic pots (c. 675-650 B.C.) but there is no absolute guarantee that the source is our *Il* and *Od* rather than some other related lay. Be that as it may, such evidence as does exist suggests a date for Hom. in the second half of the 8th-early 7th Century.

Bibliography : Kirk, *The Songs of Homer*, p. 271 ff.; id., *CAH* II, Ch. XXXIX(b) fasc. 22, passim; Allen, *Homer. The Origins and the Transmission*, p. 76 ff.; Mazon, *Introduction à l'Iliade*, p. 248 ff.; Wace-Stubbings, *A Companion to Homer*, p. 234 ff.; Bowra, *Tradition and Design in the Iliad*, p. 251 ff.

In fact, the 8th Century may well have been implied as the date in the tradition on which H.'s figure is based. For the tradition may have suggested 10 generations as the interval and this may then have been turned into years, whether by H. or not we cannot say, on the basis of a 40 year generation. If, however, we use H.'s alternative scheme of 3 generations = 100 years (vide Introduction, p. 177) we arrive at 300 years + 1 generation. Such a computation dates Hes. and Hom., at the earliest, to the first decades of the 8th Century (Wade-Gery, *The Poet of the Iliad*, p. 25 ff.; cf. Prakken, *Studies*, p. 18; Kirk, op. cit., p. 285 ff.; Wace-Stubbings, op. cit., p. 236). The genealogical information may well be Homerid and is likely to be substantially correct (in general Strasburger, *Historia* 5 (1956), p. 129 ff.).

οὗτοι δέ εἰσι ... σημήναντες : *οἱ πρῶτοι θεολογήσαντες* ap Arist., *Metaph* I, 3 (983b). The importance of Hes. and Hom. in Gk. theology cannot be overestimated. It is certain, however, that they used traditional material. Simple genealogical trees must have existed time out of mind and such interests were considerably promoted by the pride and ambitions of the nobility who patronized the epic poets (Nilsson, *HGR* p. 148). Later tradition insisted that Orpheus and Musaeus had composed theogonies before Hes. and there is good reason to believe that they were produced by *μάντεις*. Hes.'s *Th* itself bears traces of at least two earlier accounts (*KR* p. 24 ff.) and the most we can ascribe to him is that he was the first to commit a theogony to writing (Mazon, *Hésiode*, p. 24 ff.; West, *Hesiod. Theogony*, p. 14). Oriental matter is certainly used (Reitzenstein ap Reitzenstein-Schaeder, *Studien zum antiken Synkretismus. Aus Iran und Griechenland*, p. 38 ff.; Heubeck ap *Hesiod. Wege der Forschung*, XLIV, p. 545 ff.; Lesky, *GgrL* p. 113 ff.; *KR* p. 32 ff.; Walcot, *Hesiod and the Near East*) but since it has been completely assimilated into Gk. tradition we must assume that it was acquired in Mycenaean times (Hölscher, *Hermes* 81 (1953), p. 406 ff.; West, op. cit., p. 14).

In order to grasp the full significance of *θεογονίαι*, i.e. genealogies of the gods, it must be understood that, to the Gks., a genealogy essentially did two things :

(a) It asserted a family connection between individuals of the same generation and of earlier generations.

(b) It implied that the essence of the ancestor was carried through the series. "Das ursprüngliche Sein, das dem Ahnherrn innewohnt, ist an sich zeitlos; es erlischt nicht mit dem Tode des Ahnherrn, sondern stellt sich in seinen Nachkommen in zeitlicher Abfolge, in immer erneuten Modifikationen dar" (Philippson ap Heitsch (ed.), *Hesiod. Wege der Forschung*, XLIV, p. 651).

Thus the concept of the genealogy, when transferred to theology, could be used to express simultaneously several ideas :

1. It allowed Hes. and other theogonists to bring together the multifarious gods of the Gks. into one coherent system by the simple process of connecting them in families. This was the only possible way for a convinced polytheist living in the conditions of Archaic Gk. society to produce an orderly view of the universe and reflects the incipient rationalism which is soon to bear such rich fruit in Ionian Physics (Arist. describes the process as *μυθικῶς σοφίζεσθαι Metaph* III, 4, 14 (1000a); Nilsson, *Gk. Piety*, p. 3; Jäger, *Theology*, p. 10 ff.).

2. It permitted Hes. to derive all the gods from one source, namely Chaos (*Th* 116 ff.), thereby satisfying the monist instinct which so dominated Gk. thought on the material substrate (Introduction, p. 149 ff.).

3. By the genealogical principle described in (b) *supra*, Chaos (*der Ahnherr*) will continue to exist in his offspring "in immer erneuten Modifikationen". Therefore, *θεογονίη* enabled Hes. to express another typical Gk. concept, viz., the fundamental duality of the universe i.e. that its essence or the substrate of which it is composed and the qualities thereof, are timeless and constant while, at the same time, this essence forms the basis and material of the Plurality of Phenomena. This duality is, of course, identical with that postulated in the *ἀρχή/κόσμος* polarity of the early Pre-Socratics and the Being/Opinion dichotomy of Parmenides (*KR* p. 269 ff.; Jäger, op. cit., p. 90 ff.; Philippson, op. cit., p. 677 ff.).

Theogony is not an important trait of Hom.'s writings though examples do occur (*Il* XIV, 201; Jäger, op. cit., p. 195, n. 32; *KR* 9-13). We find *τὸ μυθικόν* but little *τὸ σοφίζεσθαι* but the *Il* and even more the *Od* presuppose a clear and coherent system of the Hesiodic type. Hom.'s descriptions of the gods (*εἴδεα*), their epithets (*ἐπωνυμίας*) and attributes (*τιμάς τε καὶ τέχνας*) were definitively portrayed and remained the basis for later literature and art (Nilsson, op. cit., p. 3; cf. Otto, *The Homeric Gods*, p. 44 ff.). Guthrie describes Hom.'s religious legacy "as the extraordinary feat the epic tradition accomplished in welding into a single family of deities, with clear-cut human characters, a strange collection of divine beings of widely diverse origins and nature. The achievement may appear to be poetic and literary rather than religious and if the Homeric poems stood by themselves it might be possible so to characterize it. Its religious aspect was, however, taken with great seriousness by later Gks. and for that reason the religion of Homer must be regarded as, for good or ill, one of the most influential elements in Gk. religion as a whole" (*CAH* II, Ch. XL, fasc 2, p. 45 ff.; cf. Pfister, *RE* XI, 2189 ff.).

The rôle of these two poets in religious teaching is frequently mentioned not always with approval, e.g. Xenoph., *DK* 21, F.10-11 ~ *KR* 168; Pl., *R* 606e; cf. Jäger, op. cit., p. 42. They formed the basis of Gk. secondary education (Nilsson, op. cit., p. 2; Jäger, *Paideia*, I, p. 1 ff.; Marrou, *Education in Antiquity*, p. 29) and, in the context of H.'s statement, it should be remembered that the concept of the poet as educator was widely current amongst the Gks.

οἱ δὲ πρότερον ποιηταὶ λεγόμενοι ... ἐγένοντο : Polemic against those who considered that Hom. was descended from Orpheus (Pherecyd., *FgrH* 3, F.167; Hellanic., ib., 4, F.5; Damastes, ib., 5, F.11) or Musaeus (Gorg., *DK* 82, B25; cf. Wace-Stubbings, op. cit., p. 234 ff.). The priority accorded to Orpheus and Musaeus is probably the result of the propaganda of their devotees (West, op. cit., p. 47).

τούτων τὰ μὲν πρῶτα ... ἐγὼ λέγω : H.'s care in indicating his sources on controversial matters is particularly in evidence throughout II, 52-57 (Introduction, p. 83), doubtless through nervousness at offending religious scruples.

54-57. The Eg. origins of the oracle of Zeus at Dodona. H.'s discussion falls into three sections :

54. The version of *οἱ ἐν Θήβῃσι ἱρέες*.

55. The version of *αἱ προμάντιες Δωδωναίων* and *οἱ ἄλλοι Δωδωναῖοι οἱ περὶ τὸ ἱρόν*.

They share the following characteristics :

(a) The oracle is claimed to have been founded from Eg. Thebes.
(b) The foundation of the oracles of Zeus at Siwa and Dodona are intimately connected.
(c) The *πέλειαι* motif.

56-57. H.'s discussion and rationalization of the tradition. Typically he does not dismiss it out of hand. He accepts the Phoenician slave-traders, though with a note of caution (*εἰ ἀληθέως*), and analyses the rest on the basis of two arguments :

(a) *πίστις κατὰ τὸ εἰκός* based on psychology (*ὥσπερ ἦν οἰκὸς ... αὐτοῦ ἔχειν*).
(b) *τὸ ἀδύνατον* (*ἐπείτε τέῳ τρόπῳ ἂν πελειάς γε ἀνθρωπηίῃ φωνῇ φθέγξαιτο*). Notice how similar the structure of the argument is to that of II, 45.

There were several foundation legends concerning the oracle at Dodona :

1. The Hellos Legend. When Hellos the woodcutter was about to cut down an oak, doves sent by Hebe told him that it was sacred and commanded him to found an oracle there. In a variant the founder is called Mardylas/Mandylas, a name which has Molossian parallels (Parke, *Oracles of Zeus*, p. 38).
2. The Deucalion Legend according to which the oracle was founded by D. who was led to the site by a dove (Parke, op. cit., p. 40 ff.).
3. The Thessalian Legend. The cult was connected with a Zeus Phegonius at Scotussa in Thessaly. The sacred oak of this god was burned down and on the command of Apollo the sanctuary transferred to Dodona. The obvious Delphic bias proves that this tradition is relatively late (Parke, op. cit., p. 39).

In 1 and 2, as in H.'s tradition, the doves figure prominently and there is good reason to believe that they were an integral part of the local Dodonian foundation legend (Pötscher, *Mnemosyne* 4 Series 19 (1966), p. 117 ff.). It is probable that any foundation legend acceptable to the Dodonians had to include them and thus the motif had to be integrated into the Eg. hypothesis discussed by H. What are the origins of this legend? It contains :

1. Elements of native Dodonian traditions :

(a) The πέλειαι (vide n. II, 55).
(b) The φηγός (vide l.c.).
(c) αὐτούς (II, 55, 2) is equivalent to Hellos or Mardylas/Mandylas.

In fact, the specifically Dodonian version of II, 55 is substantially tradition 1. above with the addition of a slight Eg. colouring in πελειάδας μελαίνας and the Eg. provenance thereof.

2. The correlation of the founding of Siwa and Dodona. How did this idea arise? There are many possibilities :

(a) The cult of Zeus Ammon had a marked capacity for *rayonnement*. H. and contemporaries knew that it had spread from Eg. Thebes to Siwa (vide n. II, 42), from there to Cyrene (where it enjoyed a wide currency, vide n. II, 32, 1) and from Cyrene to Greece where it was firmly implanted in Sparta, Boeotia and Olympia (Parke, op. cit., p. 202 ff.). Postulating an Eg. origin for a Gk. shrine of Zeus was, therefore, perfectly natural.
(b) H. almost certainly derived the cult of Zeus at Olympia from Egypt on the basis of the method of μαντική (vide n. II, 57, 3). The presence of the cult of Ammon, Hera Ammonia and Hermes Parammon at Olympia must have suggested to him and others that the Olympian cult of Zeus was simply a filial of Siwa and it was accepted doctrine that Zeus was a late arrival at Olympia, replacing Gē or Demeter.
(c) The Gk. mind tends to connect similar phenomena in a causal sequence. It would thus be natural to relate the three great oracles of Zeus at Dodona, Olympia and Siwa.
(d) There were close similarities in the method of μαντική at Siwa and Dodona (II, 57, 3).
(e) The *interpretatio graeca* identifying Zeus and Amūn/Ammon was certainly accepted at Cyrene before H. was born and probably dates back even earlier (vide n. II, 32, 1).

The doctrine of the common origin of Siwa and Dodona was certainly current in Greece in the early and mid-5th Century B.C.; for it was probably championed by Pi. (Schol. ad S., *Tr* 172 ~ Pi., F.49 (Bowra);

Jebb, *Trachiniae*, p. 205). He was certainly a devotee of Ammon, whom he encountered on his visit to Cyrene c. 462-1, and founded a cult on his return to Thebes (Paus., IX, 16, 1) while at the same time having an interest in the Dodonian Zeus (F.263 (Bowra)), in whose cult Boeotia had an old and very special position (Parke, op. cit., p. 58). It is no coincidence that he was the *πρόξενος* of the Molossian King (*N* VII, 65). It is possible that Pi. actually imported the doctrine from Cyrene (Parke, op. cit., p. 207). At all events, it was probably accepted at Dodona by the middle of the 5th Century; for the Louvre boasts a bronze head of Zeus Ammon (no. 4235) in Gk. style and dating c. 450 B.C. which almost certainly derives from Dodona (Parke, op. cit., pp. 208, 277, n. 8 with pl. 4). The officials of Dodona would be all the more prepared to accept this tradition because it confirmed the antiquity of their shrine as against the upstart Delphi (Parke, op. cit., p. 59) and could be harmonized without difficulty with the old Dodonian foundation legend.

The version of the Eg. priests can be explained either as the result of a series of leading questions by H. (on which cf. Brown, *AJPh* 86 (1965), p. 61) or an earlier Gk. enquirer whereby the elements of the Gk. tradition were sown in the minds of the Egs. (Sayce, *Ancient Empires*, p. 158, n. 7) or as a blatant Eg. attempt to manipulate the Gk. tradition *ad maiorem Aegyptiorum gloriam* (Gutschmid, *Philologus* 10 (1855), p. 649). Sourdille's insistence (*La Durée*, p. 182) that Gk. residents at Thebes were H.'s sources is quite impossible.

54. δύο γυναῖκας ἱερείας : Cf. II, 35, 4—a remarkable feat of inconsequence! *Ἱέρειαι* are essential because, in H.'s time, women were responsible for the administration of the oracle at Dodona, though this was a relatively recent development (vide n. II, 55, 1).

ὑπὸ Φοινίκων : The piratical bent of the Phoenicians was notorious but how H., or anyone else, thought it would be possible for them to capture two priestesses at Thebes, then transport them much of the length of Egypt and get them out of the country, is not clear.

καὶ τὴν μὲν αὐτέων ... ἐς Λιβύην πρηθεῖσαν, τὴν δὲ ἐς τοὺς Ἕλληνας : Women certainly played a part in the cult of Zeus Ammon, doubtless on the same terms as standard Eg. *ἱέρειαι* (cf. n. II, 35, 4; for Siwa vide

Curt., IV, 7, 23 ff.; D.S., XVII, 50, 6; Bates, *The Eastern Libyans*, p. 194 ff.). For priestesses at Dodona vide n. II, 55, 1.

55. αἱ προμάντιες : The attendants of the oracle differed according to period (Str., VII, 7, 12 (C329)) :

(a) *῾Ελλοί/Σελλοί* (sometimes *Τόμουροι* or *῾Υποφῆται*)—priests required to lie naked on the ground and abstain from washing their feet (Hom., *Il* XVI, 234 ff. with Eust. ad loc.; *Od* XVI, 403 with Eust. ad loc. and ad *Od* XIV, 327; Philostr., *Im* II, 33; S., *Tr* 1164 ff.; Call., *Del* 286). They were probably members of an Epirote tribe of the same name (Nicol, *G & R* 5 (1958), p. 134 ff.).

(b) *῾Ιέρειαι* replace *῾Ελλοί*. Str. (l.c.) calls them *γραῖαι* or *προφήτιδες*. The change was claimed to antedate Phemonoē, the first Pythia at Delphi (Paus., X, 12, 10), though in all probability it was due to Delphic influence (Parke, *Oracles of Zeus*, p. 75 ff.). The fact that H. mentions three prophetesses, the number found at Delphi in H.'s time, tends to confirm this hypothesis (cf. Plu., *De Def Or* 8 (*Mor* 414); Parke, *CQ* 37 (1943), p. 22). Henceforth the *῾Ελλοί* supervised sacrifices and other works (Philostr., l.c.), except for the Boeotians who always maintained the ancient practice of consulting them (Str., IX, 2, 4 (C402)). The authorities differ on the number of the *ἱέρειαι*—one ap Serv. (ad Verg., *Aen* III, 466), two ap S. (*Tr* 171 ff.) or three ap H., E. (ap Schol. ad S., *Tr* 172), Str. (VII, F.1) and Eust. (ad *Od* XIV, 327). Their austerity and solemnity are described wtih awe by Philostr. (l.c.). For further details see Carapanos, *Dodone et ses Ruines*, p. 159 ff.; Parke, op. cit., p. 69 ff.

δύο πελειάδας μελαίνας : *πέλεια/πελειάς*—generic for birds of the pigeon family (Thompson, *A Glossary of Gk. Birds*, p. 225 ff.). The type of Dodona was probably the ring dove or wood pigeon (*Columba palumbus palumbus*) which is still found in the area and both roosts and nests in tall trees. Its cry is reminiscent of human speech (Parke, op. cit., p. 43 ff.). It is sometimes stated that the priestesses were called *πελειάδες* (S., *Tr* 171; Str., VII, F.1-2; Paus., X, 12, 10; Eust. ad *Od* XIV, 327; Carapanos, op. cit., p. 159 ff.; Franke, *MDAI(A)* 71 (1956), p. 60 ff.). H. nowhere says this (he either calls them *προμάντιες* or *ἱέρειαι*) and it has been denied (Kern, *RE* V, 1261 ff.; Farnell, *CGS* I, p. 39). The importance of doves in the cult of Dodona emerges in several ways :

1. They are mentioned as being instrumental in founding the oracle in the foundation legends (vide supra, p. 252 ff.).
2. There are frequent literary references to them (Paus., X, 12, 10; Philostr., l.c.; S., *Tr* 172; Schol. ad *Il* XVI, 234; Schol. ad *Od* XIV, 327; Serv. ad *Ecl* IX, 13; id., ad *Aen* III, 466; Lact. Plac. ad Stat., *Theb* III, 106).
3. Coins of Epirus c. 300 B.C. show the sacred oak (vide infra) with doves perched upon it (Franke, op. cit., p. 60 ff. with pl. 42, 1, 2; id., *Die antiken Münzen von Epirus*, I, p. 317 ff., pl. 15, V.41-R.51; V.42-R.52 and pl. 64; Dakaris, *AK* Beiheft 1 (1963), p. 48 ff.; Pötscher, op. cit., p. 113 ff.; Parke, op. cit., p. 75 ff.). A flying dove also occurs on the coins of Cassope.
4. Bronze images of doves were discovered during the excavations (Carapanos, op. cit., pl. 21, 4,5).
5. A statuette of a priestess carrying a dove has also been found on the site (Megaw, *AR* 1967-8, p. 13).

There is, in fact, good evidence elsewhere of the connection of the dove with the cult of Zeus (cf. Hom., *Od* XII, 62 ff.; Nicol, *G & R* 5 (1958), p. 136 ff.), though the eagle is more common and occurs also at Dodona (vide infra). The dove cult continues even today in the Balkans where it has apotropaic characteristics (Durham, *Some Tribal Origins, Laws and Customs of the Balkans*, p. 250). For doves in prophecy vide n. II, 57,3.

ἰζομένην δέ μιν ἐπὶ φηγόν : Sometimes, as here, the *φηγός* is mentioned as Zeus' tree (Hom., *Il* V, 693; VII, 60 ff.; Hes., F.240, 319 (Merkelbach-West)), sometimes the *δρῦς* (Hom., *Od* XIV, 327 ff.; XIX, 296 ff.). The discrepancy is only apparent, however; for *δρῦς* is a generic term including *φηγός* (Dsc., I, 106; Thphr., *HP* III, 8, 2 ff.; Nilsson's scepticism on the species of tree (*GgrR* I, p. 424 ff.) is unjustified; for the *φηγός* is certainly *Quercus macrolepis* "the Valonia Oak" (Parke, op. cit., p. 30)). The great importance of the oak at Dodona is illustrated by several things :

1. Literary sources (Hes., l.c.; Hom., *Od* l.c.; Eust. ad *Od* XIV, 327;

Verg., *G* I, 147 ff.; Schol. ad Luc., *Phars* III, 179; St. Byz., s.v. *Δωδώνη*; Schol. ad Hom., *Il* XVI, 233). A piece of the oak was inserted in the Argo (Orph., *A* 268 ff.; A.R., I, 526 ff.; Apollod., I, 9, 16).

2. Coins (Franke, l.c.).

3. Bronze oak leaves and acorns were discovered on the site (Carapanos, op. cit., pl. 49, 8, 10, 12; Evangelides, *ʼΕπ. Χρον.* 1935, p. 238).

The environs of Dodona were well planted with these trees in antiquity and examples are still to be found (Nicol, op. cit., p. 128 ff.; Kern, op. cit., 1258 ff., 1261). The *φηγός* was sacred to Zeus and was the major cult object of the shrine (vide n. II, 56,2). Such a rôle for the oak was extremely uncommon in Greece, though not unparalleled (cf. Zeus Lycaeus, Parke, op. cit., p. 20 ff.), but occurs both in Italy and pagan Prussia where striking parallels to the *Ἑλλοί* are also in evidence. In fact Indo-Europeans generally regarded the oak as the tree of the highest god of heaven (Kern, op. cit., 1261 ff.; Frazer, *GB* II, Ch. 20; Parke, op. cit., p. 21 ff.), and there can be no doubt that the Dodonian cult was introduced by the first Indo-European invaders (vide infra). Coins (vide supra) represent doves perched on the tree in precisely the position described by H. According to Serv. the sacred oak was eventually cut down by an Illyrian bandit (ad Verg., *Aen* III, 466)! At all events the same tree could not have served throughout the history of Dodona for a Valonia Oak could only have lived 800 years at the most (Parke, op. cit., p. 30 ff.). The excavations have revealed in the sacred area S. of the Acropolis of Dodona and E. of the *ἱερὰ οἰκία* a hole 2.50 m. in diameter which, beyond any doubt, marks the site of H.'s *φηγός* (Dakaris, *AD* 16 (1960), pp. 37 ff.).

μαντήιον ... Διός : At Dodona Zeus was worshipped as *Ζεὺς Νάϊος* (Carapanos, op. cit., pp. 5, 39 ff.; Kruse, *RE* XVI, 2, 1586; *SIG* 392, 2, 1163, 1; Parke, op. cit., p. 68) though *τὸν Δία τὸν Δωδωναῖον* does occur (Carapanos, op. cit., p. 79). His attributes there were the eagle (coins—Franke, op. cit., pl. 15, V.41-2, eagle perching on a mountain (Tomarus?); bronze eagle on lotus flower probably from statuette of Zeus, Megaw, *AR* 1967-8, p. 13; eagle cults still occur in the Balkans, Durham, *Man* 23 (1923), p. 55 ff.), the dove (vide supra), the thunderbolt (dedications—Dakaris, *AK* Beiheft 1 (1963), pl. 21, 9; Neugebauer, *Antike Bronzestatuetten*, fig. 28; Evangelides, *PAAH* 1952, p. 286 ff., fig. 6) and the oak (vide supra). Dedications are often made jointly to him and his consort Dione Naia in the form *Διί τῷ Ναίῳ καὶ τᾷ Διώνᾳ* (Carapanos, op. cit., p. 5; Evangelides, op. cit. 1932, p. 52). In Hell. times a festival called the *Νάϊα* was celebrated (Parke, op. cit., Index, s.v. Naia).

The origins of this cult are difficult to unravel, but H.'s view is certainly wrong. The evidence is as follows :

1. The characteristics of the cult :

(a) The cult-title *Νάϊος*.
(b) The oak.
(c) The *Ἑλλοί*.
(d) The oracle.

2. The history and archaeology of Dodona.

1. (a) *Νάϊος* : Etymologies from *νάω* "flow" (*LSJ* p. 1163, a, s.v. *νάω*) and *ναίω* "inhabit" (ib., p. 1159, b, s.v. *ναίω*), though a non-Indo-European origin is always possible (Parke, op. cit., p. 78, n. 36). It is, however, certain that in classical times the first held the field and that Zeus at Dodona was connected with water :

(i) Schol. ad *Il* XVI, 233 glosses *ὑδρηλὰ γὰρ τὰ ἐκεῖ χωρία.*
(ii) Figures of Zeus in the attitude of Poseidon have been found at Dodona (Walters, *B.M. Cat. of Bronzes*, London, 1899, no. 274, pl. VI, 2; Carapanos, op. cit., pl. 12, 4).

Cf. Pötscher, *Mnemosyne* 4 Series 19 (1966), p. 131 ff.

(b) The sacred and prophetic oak has parallels in Italy and N. Europe where it is connected with the Indo-European sky god (vide supra).
(c) The *Ἑλλοί* have close parallels in pagan Prussia and affinities in Italy (vide supra).
(d) An oracle of Zeus is extremely unusual. The only other example in Greece is at Olympia where he was certainly preceded by an earth goddess (Parke, op. cit., p. 180 ff.). In fact oracular responses are very frequently connected with earth in some way e.g. the priestess at Aegeira in Achaea entered a hollow (Parke-Wormell, *Delphic Oracle*, I, p. 10);

the oracles of Trophonius at Lebadeia were obtained from a chasm in the earth (Ar., *Nu* 506 ff.; Paus., IX, 39, 5 ff.; Parke, *Gk. Oracles*, p. 126 ff.); some sort of rock cavity is likely in the shrine of Apollo at Delphi where there are clear traces of an earth goddess preceding the god (*hAp* 214 ff.; Parke-Wormell, op. cit., I, p. 3 ff.; Parke, *Gk. Oracles*, pp. 35 ff., 77 ff.); the Sibyl at Cumae is connected with a cave (Verg., *Aen* VI, 42 ff.; Maiuri, *The Phlegraean Fields*, p. 123 ff.; Parke, op. cit., p. 49 ff.); Epirus itself boasted several oracles with chthonic affinities (Hammond, *Epirus*, p. 232 ff.). These facts, together with the hymn of the Priestesses of Dodona celebrating both Earth and Zeus mentioned by Paus. (X, 12, 10), suggest that the oracle of the Dodonian Zeus had chthonic connections.

2. The history of Dodona :

(a) There is evidence of Palaeolithic, Neolithic and sub-Neolithic peoples in the coastal area of Epirus but not at Dodona (Hammond, op. cit., p. 289 ff.).
(b) The earliest pottery at Dodona is possibly *EH* III, certainly not later than early *MH*. This appears to reflect a movement spreading from southern Greece. Hammond argues (op. cit., pp. 308 ff., 312) that, since the appearance of *EH* pottery in Leucas and Ithaca is usually related to the spread of non-Hellenic peoples from the Peloponnese, the arrival of this material in Dodona will probably indicate occupation by a pre-Gk. population. This idea is impossible to accept. The ware in question is clearly transitional between *EH* III and *MH* and the first Indo-European i.e. *Ur-Gk.* invasion of Greece had taken place at the end of *EH* II c. 2300-2200 B.C. (cf. Weinberg ap Ehrich, *Chronologies in Old World Archaeology*, p. 305), a fact of which Hammond was apparently unaware (cf. op. cit., p. 312). The close *MH* affinities of the pottery make it impossible to suggest that the settlers were pre-Indo-European refugees. They were an Indo-European nomadic shepherd people with a low standard of life.
(c) The appearance at Dodona of pottery with Macedonian affinities quickly fusing with the above reflects the arrival of a shepherd people from the E. after c. 1900 B.C. This material spreads even into S.W. Greece (Hammond, op. cit., pp. 307, 312). These settlers were almost certainly Indo-Europeans since their appearance in Epirus coincides

with the "time that Greek-speaking peoples were entering Central and Southern Greece" (op. cit., p. 312). Indeed any other provenance would be extremely difficult to square with the indisputable facts that the vast majority of place names in Epirus are Gk. (op. cit., p. 394 ff.) and that there is no hint of anything but Gk. being spoken in the area in classical times.

(d) Clear traces of Mycenaean civilization exist in Epirus e.g. pottery, tholoi and cist tombs. Dodona has yielded small finds—*LH* II or III knives and daggers (Hammond, op. cit., p. 329) and a *LH* III sword (op. cit., p. 326). Daggers of Cypriot and Minoan affinities and probably *MH* date have also been found there (Hammond, op. cit., p. 329 ff.). Recently, Mycenaean sherds of *LH* III have been unearthed in the Bouleuterion together with bronze double axes (Frazer, *AR* 1968-9, p. 21).

(e) A bronze ax with high socket and disc-shaped butt found at Dodona has affinities with products of the Urnfield Culture of Hungary (Hammond, op. cit., p. 331) and dates to *LH* III (c. 1250-1150 B.C.) as do several double-bladed axes from the site (Hammond, op. cit., p. 333). Since they are battle-axes and since such weapons are known to have been carried by invaders from Hungary in other parts of Europe, Hammond suggests that they reflect an invasion of Epirus from that area but admits that their influence was not lasting. Trade is, however, equally likely as the source.

(f) Dark Age material indicates continued contact with the N., particularly with the Halstatt Culture of S. Germany (Hammond, op. cit., p. 407 ff.).

There is, therefore, no archaeological evidence of any but Indo-European inhabitants at Dodona. The culture of Dodona is backward, receiving some stimulus from Mycenaeans to the south in the expansion of trade to the N.W. in *LH* III (Hammond, op. cit., p. 390 ff.; Hope-Simpson-Lazenby, *The Catalogue of the Ships*, p. 150; Parke, *Oracles of Zeus*, p. 98), but retaining its essential characteristics until the Archaic Period.

Data 1(a), (b) and (c) and 2 prove that the Dodonian Zeus was an Indo-European sky god who was connected particularly with water and retained closer affinities with the old cult than any other known in Greece. The association with water, natural enough for a sky god, was particularly emphasized at Dodona because the area was so wet (Parke, op. cit., p. 68) and there is no need to postulate a spring or oak god *Νάϊος* as predecessor (as do Kern, op. cit., 1261; Evangelides, *PAAH* 1929, p. 109). Furthermore, the data prove that Zeus was worshipped there from the late 3rd Millennium; for Indo-Europeans without the great sky god are out of the question. Thus, Dakaris' Mycenaean origin for Dodonian Zeus (op. cit., p. 48) is quite untenable. Datum 1(d) makes it highly likely that the Dodonian Zeus had chthonic affinities. These are not, however, to be derived from an earth goddess, whether predecessor or not (as by Philippson, *Die griechischen Landschaften*, II, 1, p. 85, n. 5; Kirsten-Kraiker, *Griechenlandkunde*^{5}, p. 740; Nicol, *G & R* 5 (1958), p. 133 ff.; Dakaris, *AK* Beiheft 1 (1963), p. 45 ff.; Hammond, op. cit., p. 369). The practices of the Italian and Prussian parallels prove that the sky god's oak could be quite autonomous in the exercise of prophetic functions and the habits of the *ʽΕλλοί* indicate that the power of the prophetic oak was considered in some way to derive from earth. The disappearance of prophetic Zeus in Greece is probably due to the absence of satisfactory oaks and the competition of other sources of prophecy.

αὐτούς : i.e. the Pelasgian inhabitants of Dodona.

τῶν τῇ πρεσβυτάτῃ ... Νικάνδρῃ : Nicol (op. cit., p. 137) suggests that these names are in fact titles. Since, however, H. is here concerned with pinning down his sources with the maximum of precision, it is more probable that they are proper names. A list of the titles of the priestesses would not serve any such purpose; for most, if not all, interested Gks. would presumably know them.

οἱ ἄλλοι Δωδωναῖοι οἱ περὶ τὸ ἱρόν : Possibly the *ʽΕλλοί* or at least including them (cf. Hom. *Il* XVI, 234 ff. *ἀμφὶ δὲ Σελλοὶ σοὶ ναίουσ'* ~ *οἱ περὶ τὸ ἱρόν*; *Δωδώνης* ~ *οἱ ἄλλοι Δωδωναῖοι*; Pötscher, *Mnemosyne* 4 Series 19 (1966), p. 122; Hammond, op. cit., p. 368).

56. τῆς νῦν ʽΕλλάδος, πρότερον δὲ Πελασγίης καλευμένης τῆς αὐτῆς ταύτης : Cf. n. II, 50.

ἐς Θεσπρωτούς : The oracle certainly lay in Thesprotian hands in high antiquity (*Od* XIV, 314 ff.; XIX, 287), though the Catalogue speaks only of Enienes and Perrhaebians in the area (*Il* II, 750 with Hope-Simpson-Lazenby, *The Catalogue of the Ships*, p. 149 ff.). By H.'s time Dodona had become the territory of the Molossians whose power gained considerably thereby (Pi., F.263 (Bowra); Str., VII, 7, 5 (C323-4): VII, 7, 11 (C328)) while the *Θεσπρωτοί* shared with the *Χάονες τὴν ἀπὸ τῶν Κεραυνίων ὀρῶν μέχρι τοῦ Ἀμβρακικοῦ κόλπου παραλίαν* (Str., VII, 7, 5 (C323-4); Parke, *Oracles of Zeus*, p. 11). The *Θεσπρωτοί* were probably the early Indo-European inhabitants of Dodona who came from the S. and E. c. 2000 B.C. while the Molossians came from Macedonia c. 1200 and pushed in between Dodona and the E. Pindus range. In this movement *οἱ Δωδωναῖοι* may have been left as an autonomous community under Molossian protection (Hammond, *Epirus*, p. 479). At all events it remained the religious centre of the Thesprotians until c. 400 B.C. (cf. E., *Ph* 982). The Molossians gained absolute control of Epirus c. 400 (Evangelides, *AE* 1956 (1959), p. 1 ff.; *SEG* 15 (1958), no. 384; Murakawa, *Historia* 6 (1957), p. 393 ff.; Dakaris, *AE* 1957 (1961), p. 88 ff.; id., *AK* Beiheft 1 (1963), p. 35). For *Ζεὺς Θεσπρωτός* vide A., *Pr* 831; Suidas, s.v. *Δωδώνη*.

ἱδρύσασθαι ... Διὸς ἱρόν : "Established a shrine, holy place". There was no temple in H.'s time. The oak was the focal point of the cult and the ground about it was doubtless regarded as sacred, possibly being demarcated by *ἀναθήματα*, e.g. tripods, to form a *τέμενος* (Demon, *FgrH* 327, F.20a-b; Evangelides, *PAAH* 1929, p. 108; Dakaris, *AK* Beiheft 1 (1963), p. 37 ff.; Parke, op. cit., p. 117). It is probable that an altar also existed near the oak; for there was certainly one there in later times (Dakaris, op. cit., p. 37) and at Olympia, where Zeus likewise had no temple until the middle of the 5th Century, the focal point of the cult was a large altar of sacrificial ashes (Parke, op. cit., pp. 164, 182 ff.). The first temple, the *ἱερὰ οἰκία* (cf. Plb., IV, 67), was built c. 400 B.C. and around that, in the last quarter of the 4th Century, a peribolos was constructed enclosing both oak and temple. At the beginning of the 3rd Century Pyrrhus added considerably to the shrine, doubtless with the intention of making Dodona his religious capital. The temple was plundered by the Aetolians in 219 B.C. and then thoroughly rebuilt and extended by Philip V. The sacred area of Dodona also included temples of Herakles, Dione, Aphrodite Aeneas, a guest-house for visitors and a theatre, all dating from the time of Pyrrhus. In general vide Dakaris, op. cit., p. 35 ff.; Parke, op. cit., p. 98 ff.

57. ἡ δὲ μαντηίη ... ἐοῦσαι : *ἐχρησμῴδει δ'οὐ διὰ λόγων, ἀλλὰ διά τινων συμβόλων, ὥσπερ τὸ ἐν Λιβύῃ 'Αμμωνιακόν* (Str., VII, F.1a). In H.'s time questions were put to the oracle by being written on strips of lead by the enquirer himself in such a way that a straight "Yes" or "No" answer could be given. These strips, about 3″ long × 1″ wide, were inscribed on one side only and then were folded over several times to conceal the writing. Next a serial number was placed on the back and then all the enquiries were probably placed in a jar. The method of obtaining the oracular response is not absolutely clear but there is reason to believe that it was similar to the Delphic bean method (Parke, op. cit., pp. 83 ff., 102 ff., 111 ff.). Probably a priestess extracted the enquiries from the pot one by one and, at the same time, drew a lot from another jar, the lot giving the god's decision. About 150 examples of these lead enquiries have been found on the site, running from the late 6th Century to the middle of the 3rd when they cease (Parke, op. cit., p. 100 ff.; id., *JHS* 87 (1967), p. 132 ff.) and there is no doubt that it is to these that Str.'s *σύμβολα* "tokens" refer. If this reconstruction is correct, there would have been two similarities with Eg. oracles (for which see n. II, 83) viz. the straight "Yes" or "No" response and the use of written questions. This technique was not, however, the oldest method. It is almost certain that it was the creaking or rustling of the oak (Orph., *A* 264; A.R., I, 526 ff.; Apollod., I, 9, 16; Hes., F.240 (Merkelbach-West); A., *Pr* 832; S., *Tr* 1168; Paus., VII, 21, 2; Philostr., *Im* II, 33; Verg., *G* II, 16; Eust. ad *Il* II, 750; Suidas, s.v. *Δωδώνη*) and possibly the movements or cooing of the sacred doves (cf. Schol. ad *Od* XIV, 327; Str., VII, F.1a, c; Paus., l.c.; Philostr., l.c.; D.H., I, 14, 5; Schol. ad *Od* XIV, 327) which expressed the god's will in high antiquity. These sounds were then interpreted by the *'Ελλοί* (*ὑποφῆται LSJ* p. 1901, a, s.v.). Such techniques may have been brought to an end by the death of the sacred oak (vide supra, p. 257 for this question) and the lot-oracle introduced as a temporary replacement until a new tree could be brought into commission and then, by its very convenience, it may have become standard practice (Parke, op. cit., p. 75 ff.). Statements about oracular interpretation of the sounds made by bronze basins set up as dedications (Eust., l.c.; Demon, l.c.; Serv. ad Verg., *Aen* III, 466; cf. Str., VII, F.3) and oracular springs (Serv., l.c.) should be treated with the greatest reserve.

ἔστι δὲ καὶ τῶν ἱρῶν ἡ μαντικὴ ἀπ' Αἰγύπτου ἀπιγμένη : Technically called *ἔμπυρα* (*LSJ* p. 549, a, s.v. *ἔμπυρος* III, 2), this method is known for the oracle of Zeus at Olympia (Pi., *O* VIII, 3; Schol. ad Pi., *O* VI, 7; cf. S., *Ant* 999 ff.; Schol. ad Ar., *Pax* 1054) and the Ismenian Apollo at Thebes (H., VIII, 134). The will of the god was diagnosed not from an examination of the entrails but from the behaviour of the sacrifice when alight. At Olympia the Iamids used simply the skin of the sacrificial animal (Parke, op. cit., pp. 164, 184). It is probable that H. has Olympia in mind :

(a) The juxtaposition with a discussion of the Eg. origins of methods of divination at Dodona.
(b) There was a cult of Zeus Ammon at Olympia (vide supra, p. 253).
(c) The Clytiadae, who shared the administration of the oracle of Olympia with the Iamids, were descended from the Melampodids (Parke, op. cit., p. 173 ff.). H. considers that Melampus derived a great deal from Egypt (II, 49) and the Melampodids certainly practised the art of prophecy from sacrifices (Parke, op. cit., p. 180).

The practice is unknown in Egypt but, since omens of various sorts were taken (Bonnet, *RÄRG* p. 542 ff.), it would not be surprising if some shrines had developed the habit of determining the divine will from the behaviour of the sacrifice. Even an occasional recognition of an omen in this way would satisfy the requirements of the passage without our needing to assume an institution (e.g. a *μαντήϊον*) using it as standard practice.

58. πανηγύριας : *Πανήγυρις* = "general assembly, national festival" (*LSJ* p. 1297, b, s.v. *πανήγυρις* I); "religious gathering" (Powell, *Lexicon*, p. 287); *Volksfest* (Ziehen, *RE* XVIII, 3, 582)—not originally a sacral term and occasionally secular even in classical times (cf. Pl., *R* X, 604e; Thphr., *Char* VI, 7) but in most cases applied to festivals attended by many people from a wide area. The Olympian, Pythian, Isthmian and

Nemean Games are often so called (Pi., *I* IV, 28; D., *De Cor* 91; Pl., *HpM* 363c; Arist., *Rh* III, 3, 3 (1406a); Paus., V, 4, 5) as are great national festivals such as the *Δήλια* (Nilsson, *Gr. Feste*, p. 144 ff.), the *Πανιώνια* (Nilsson, op. cit., p. 74 ff.), the *Παμβοιώτια* (*IG* VII, 2711, 56; Plb., IV, 3, 5) and the Festival of Hera Lakinia (Ps. Arist., *Mir* 96). Other famous festivals described as *πανηγύριες* are the Hyacinthia at Sparta (Ath., IV, 139d), the Athenian Eleusinia (*SIG* 547, 7), and the Euboean and Ephesian Artemisia (op. cit., 714, 6; 867, 2-3). In general vide Nilsson, *GgrR* I, p. 826 ff. For Eg. festivals of this type cf. nn. II 59-63.

πομπάς : *Πομπή* = "solemn procession" (*LSJ* 1446, b, s.v. *πομπή* (b)); "procession" (Powell, *Lexicon*, p. 314); *Prozessionen und Umzüge* (Bömer, *RE* XXI, 1878). This non-Homeric sense derives from *πέμπω* "I escort, accompany" (*LSJ* p. 1359, b, s.v. *πέμπω* III) and refers to the act of accompanying the cult statue or the offering in solemn procession (*ἡ ἐν ταῖς τῶν θεῶν πανηγύρεσι πρόοδος*, Thom. Mag., s.v.) for the performance of a cult act e.g. offering, *πλυντήρια*, *ἱερὸς γάμος* (cf. Chapouthier, *BCH* 53 (1929), p. 62; Bömer, op. cit., 1886). The rite is not itself an independent cult act but forms part of a *ἑορτή* or *πανήγυρις* which may be divided into a *παννυχίς*, *πομπή*, *θυσία* and *ἀγών*. *Πομπαί* were extremely common in Greece (cf. list ap Bömer, op. cit., 1913 ff.), the most famous, splendid and influential being the Athenian triad of the Panathenaic Festival (accompanying of the *πέπλος*, Deubner, *Attische Feste*, p. 22 ff.), the City Dionysia (*πομπή* of the *φαλλοί* and offerings cf. Pickard-Cambridge, *DFA*^{2} Index, s.v. *πομπή*) and the Eleusinia (Deubner, op. cit., p. 91 ff.). The Eg. equivalent of the *πομπή*, the *Prt nṯr* "Emergence of the God" (*Wb* I, p. 525, 7-11), was the commonest type of Eg. festival. The cult statue was taken from the *sanctum* (*st wrt*), placed on a bark and carried out in solemn procession by the priests to be shown to the people. On such occasions in H.'s time the god would often give oracular responses (cf. n. II, 83). Frequently the *Prt* would take the form of a processional visit by one god to another e.g. the visit of Amon-rēʿ to his spouse Mut in the splendid festival of Opet (cf. II, 42), the same god's visit to the dead kings of Egypt on the western bank opposite Thebes in the Festival of the Valley (Foucart, *BIFAO* 24 (1924), passim; Schott, *Das schöne Fest vom Wüstentale*), that of Min of Coptos to his mother Isis (Gauthier, *Les Fêtes du Dieu Min*, p. 15 ff.) and that of Ḥatḥor of Dendera to Ḥorus of Edfu (Alliot, *Le Culte*, II, p. 447 ff.). Cf. further on II, 48 & 63 and in general Erman, *Die Religion*, pp. 179 ff., 198 ff.; Vandier, *La Religion*^{2}, p. 183 ff.; Bonnet, *RÄRG* pp. 186 ff., 610 ff.; Yoyotte, *Les Pèlerinages*, p. 45 ff.

προσαγωγαί : "*Solemn approach*, as at festivals or in supplication" (*LSJ* p. 1500, a, s.v. *προσαγωγή* II, 1); "procession to shrine" (Powell, *Lexicon*, p. 322). How does a *προσαγωγή* differ from a *πομπή*? The only clue is H.'s use of *προσάγειν* in a cult sense. We find two relevant expressions :

(a) *Προσάγειν ἄγαλμα* (II, 42, 6) referring to the Eg. practice of the *Götterbesuch*.

(b) *Προσάγειν θυσίας* (III, 24, 4; IV, 62, 2), a usage common in Gk. (*LSJ* p. 1499,b, s.v. *προσάγω* I, 1). In Patristic Gk. *προσαγωγή* is used in the sense "offering" and is coupled with *θυσία* e.g. *ἐν ταῖς τῶν θυσιῶν προσαγωγαῖς* (Lampe, *A Patristic Gk. Lexicon*, p. 1164, b, s.v. *προσαγωγή* 6).

Given these data we may reason as follows. Since *προσαγωγή* must fit Gk. and Eg. cult practice and since there is no evidence in Greece of the divine-visit in the required form, the lexicographical evidence forces us to conclude that the word here means "a solemn procession bringing offerings to the god". *Πομπή* can be used in Gk. to refer to processions involving either cult statues or offerings (vide supra). H. is, however, distinguishing the *πομπή* from the *προσαγωγή*. The latter has been shown to refer in his work to offering-processions. We may, therefore, assume that to him the word *πομπή* was associated with escorting the divine image *and that only*. Since his use of the word still bears archaic traits (Bömer, op. cit., 1882), it would be natural enough for him to confine it to such a rôle.

τεκμήριον δέ μοι ... νεωστὶ ἐποιήϑησαν : The *post hoc ergo propter hoc* principle, one of the commonest fallacies in cultural history and the basis of all diffusionist theories of civilization. It dominates H.'s thinking on the origins of Gk. culture and explains most of his strange ideas on the subject (see Introduction, p. 147 ff.). There is, in fact, good Bronze Age evidence of *πομπαί* at least in Aegean contexts e.g. the Hagia Triada Sarcophagus (Nilsson, *GgrR* I, p. 303 ff.), a fragmentary painting from Hagia Triada (Nilsson, op. cit., p. 304; id., *MMR* p. 436 ff.) and a painting at Cnossos (Evans, *Palace of Minos*, II, 2, p. 719 ff.). Indeed, Didymus (F.14 (Schmidt)) states that Crete was the origin of such processions. H.'s conviction of their recent appearance may derive from the fact that *πομπαί* were clearly not important in Homer (cf. Bömer, op. cit., 1894).

59. πανηγυρίζουσι ... συχνάς : Festivals were legion in Ancient Egypt, each temple having its own festival calendar, e.g. the calendar of Ḥorus and Ḥatḥor at Edfu (Alliot, *Le Culte*, I, p. 197 ff.) and that of Amon-rēʿ at Medinet Habu (Nelson, *Medinet Habu*, III, pl. 136-167; Bonnet, *RÄRG* p. 185 ff.; Bleeker, *Egyptian Festivals*, p. 25). The latter, drawn up in the reign of Ramesses III, contains festivals for every 3rd or 4th day (Leeuwenburg, *JEOL* 7 (1940), p. 327 ff.), though only a few will have been public (cf. Gaballa-Kitchen, *Orientalia* 38 (1969), p. 47 ff.). The majority of those on temple lists were purely local in character but great national festivals attracted many people (see further II, 60-63), the most important of them often lasting several days and tending to get longer in the course of time (cf. II, 61; Opet lasted 11 days in the reign of Tuthmose III, 27 in that of Ramesses III).

Eg. festivals (*ḥbw*, *Wb* III, pp. 57, 5-23-60, 1-9) can be divided into three categories :

1. Festivals of the Gods which included calendar festivals i.e. those related to important points in the farming year (e.g. the rising of the Nile), festivals relating to astronomical phenomena (e.g. the phases of the moon) and festivals based on divine myths (e.g. the Mysteries of Osiris at Abydos).
2. Royal Festivals which included the coronation festival and the *Ḥb Sd* or Thirty-Year Festival.
3. Festivals of the Dead which included the *W3g*-Festival and the Festival of the Valley. In fact the dead expected to participate in a wide range of *ḥbw* (Kees, *Totenglauben*, p. 254 ff.; Parker, *The Calendars of Ancient Egypt*, p. 34 ff.).

Such events formed a crucial part of Eg. religious life in that it was on such occasions above all that the people and the gods came into immediate contact. Indeed, the attendance at *ḥbw* was an imperative duty of the faithful (cf. Lange-Schäfer, *CGC. Grab und Denksteine des mittleren Reiches*, pl. XX, 20, 281) and constituted a standing claim to favour from the god; for the presence of the devotee involved him as an active assistant of the deity in the divine act which formed the motive for the festival (Foucart, *BIFAO* 24 (1924), p. 104 ff.; Drioton, *Les Fêtes Égyptiennes*, p. 7 ff.; Yoyotte, *Les Pèlerinages*, pp. 35 ff., 47). The statement that 700,000 visitors attended the *πανήγυρις* at Bubastis (II, 60, 3) has its parallels in Eg. sources e.g. "at the feasts of Karnak, we know that the number (sc. of visitors) amounts to 100's of 1000's" (Karnak, S. jamb of great door of 2nd Pylon, l. 10. Ptol. VII). For large attendance at festivals in Hell. times vide Botti-Romanelli, *Le Sculpture del Museo Gregoriano Egizio*, p. 82, 9; and in general Yoyotte, op. cit. p. 48 ff.

H.'s accounts of Eg. festivals is important for two reasons :

(a) It gives a detailed description of the most important festivals of L.E., whereas our Eg. evidence is largely concerned with U.E.

(b) His interests were different from those of the Egs. Liturgy and processions did not concern him but the behaviour of the ordinary worshippers at the festivals did. He is thus an invaluable corrective to the one-sided Eg. tradition (Drioton, op. cit., pp. 11, 26).

Bibliography : Foucart, *BIFAO* 24 (1924), passim; Bilabel, *Neue Heidelberger Jahrbücher* N.R. 1929, p. 1 ff.; Erman, *Die Religion*, Index, s.v. Feste; Erman-Ranke, *Ägypten*, p. 317 ff.; Gauthier, *Les Fêtes du Dieu Min*, passim; Drioton, *Les Fêtes Égyptiennes;* Vandier, *La Religion Égyptienne* ², p. 179 ff.; Bonnet, *RÄRG* pp. 185 ff., 187 ff., 610 ff.; Drioton, ap Mercer, *PT* IV, Exc. XXI; Wolf, *Das schöne Fest von Opet*; Frankfort, *Journal of the Warburg and Courtauld Institutes* 15 (1952), p. 1 ff.; Schott, *Mythe und Mythenbildung*, p. 6 ff.; Parker, *The Calendars of Ancient Egypt*, pp. 33 ff., 47 ff., 57 ff.; Morenz, *Ägyptische Religion*, Index, s.v. Fest, Festkalender, Festspiele, Festtage; Schott, *Das schöne Fest vom Wüstentale*; Helck-Otto, *Kleines Wörterbuch*², p. 101 ff.; Sauneron, *Les Fêtes Religieuses d'Esna*; Christophe, *Cahiers d'Histoire Égyptienne* 7(1) (1955), p. 35 ff.; Yoyotte, *Les Pèlerinages*; Alliot, *Le Culte d'Horus à Edfou*, I, II; Schott, *Altägyptische Festdaten*; Bleeker, *Egyptian Festivals.*

ἐς Βούβαστιν πόλιν : Cf. II, 67, 137-8, 166; St. Byz., s.v. *Βούβαστις*; Mela, I, 60. Capital of the 18th Nome of L.E. Eg. *Bꜣst*, later *Pr Bꜣstt* "House of Bastet" (Chassinat, *Edfou*, I, p. 335; *Urk* III, 11, 45, 114) whence Ass. *Bubasti*; Heb. פִּי־בֶסֶת *Pî bhĕsĕth*; Gk. *Βούβαστος*, *Βούβαστις*; Copt. ⲡⲟⲩⲃⲁⲥϯ; Arab. Tell Bast. Although mentioned by Man. Hist.

in the IInd Dyn. (*FgrH* 609, p. 18 ff.) and yielding archaeological material from the IVth, not a city of the first rank until the rise of the XXIInd (Bubastite) Dyn. c. 950 B.C.

Bibliography : Naville, *Bubastis*; id., *Festival-Hall of King Osorkon II*; Sethe, *RE* III, 931 ff.; *PM* IV, p. 27 ff.; Gauthier, *DG* II, pp. 5, 75; Bonnet, *RÄRG* p. 126; Montet, *DG* I, p. 173 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 72 ff.

τῇ Ἀρτέμιδι : Called *Βούβαστις* ap II, 137, 156 (cf. *CIG* 7039; St. Byz., s.v. *Βούβαστις*; Ov., *Met* IX, 691) = Eg. *B3stt Nbt B3st* "Bastet, Mistress of *B3st*" (Kolta, *Die Gleichsetzung*, p. 24 ff.). This cat/lion-headed goddess is often represented in bas-reliefs of XXIInd Dyn. date from the site (Naville, *Bubastis*, pl. XLI & XLVII and cf. on II 66-7). H., II, 138 describes her splendid temple, traces of which were unearthed by Naville (op. cit., p. 1 ff.).

ἐς Βούσιριν πόλιν : Here the capital of the 9th Nome of L.E., though a common place-name. Originally *ʿnḏt* hence nome-name *ʿnḏt*; normally *Ḏdw* later *Pr Wsỉr Nb Ḏdw* (*Urk* III, 11, 18; 46, 116), shortened to *Pr Wsỉr* (Brugsch, *DG* p. 1135; Spiegelberg, *Sagenkreis*, p. 48, l. 14) whence Ass. *Pusīru* (Ranke, *APAW* 1910, Anhang, p. 49); Gk. *Βουσῖρις*; Copt. ⲃⲟⲩⲥⲓⲣⲓ; Arab. Abu Sîr. Ruins, unexcavated, at Bana, 5.5 kms. S. of Samannûd. The city boasted a grave of Osiris (D.S., I, 85, 5; Plu., *DIO* 21 (*Mor* 359)) and in the cult of Osiris was second only to Abydos. The paramount importance of this god in the area is indicated by Graeco-Roman coins of the city which bear his effigy together with the image of a ram and a snake (Tochon d'Annecy, *Recherches Historiques et Géographiques sur les Médailles des Nomes*, p. 190 ff.; Feuardent, *Collections G. di Demetrio. Numismatique. Égypte Ancienne*, p. 322). Further n. II, 61.

Bibliography : Sethe, *RE* III, 1073 ff.; Gauthier, *DG* I, p. 151 ff.; VI, p. 135 ff.; Gardiner, *AEO* II, pp. 151*, 176 ff.*, 236*; *PM* IV, p. 44; Bonnet, *RÄRG* p. 129; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 73.

τῇ Ἴσι : Cf. on II, 41-2.

Ἶσις δέ ἐστι ... Δημήτηρ : Cf. II, 156, 5. On the identification vide Kolta, op. cit., p. 42 ff.

ἐς Σάϊν πόλιν τῇ Ἀθηναίῃ : See on II, 28, 1. For the *πανήγυρις* vide n. II, 62.

ἐς Ἡλίου πόλιν τῷ Ἡλίῳ : See on II, 3, 1 for Heliopolis and II, 63, 1 for the *πανήγυρις*.

ἐς Βουτοῦν πόλιν : Eg. *Pr W3ḏt* "House of Wadjet"; Gk. *Βουτώ*, *Βοῦτος*; Copt. ⲡⲟⲩⲧⲟ, ⲡⲟⲩⲧⲱⲟⲩ etc. The name of several cities, occurring in the 10th and 20th Nomes of U.E. and the 19th of L.E. (see on II, 75), B. is used, above all, as the late name of the twin city *P* and *Dp* (*Wb* V, p. 443, 1) in the 6th Nome of L.E. The site is now marked by Tell el-Farâ'în in the N.W. Delta, just N. of the village of Ibtû which preserves the ancient name. H. himself uses the name to refer to two cities; for the geographical indications in II, 155 only fit the city in the 6th Nome while those in II, 75 (q.v.) only fit that in the 19th. Which does he mean here? II, 83, 111, 2; 133, 1; 152, 3; 155, 6; III, 64 taken together prove that H. associates the syndrome Leto-oracle-Buto with the 6th Nome not the 19th (cf. also Str., XVII, 1, 18 (C802)). Since *Βουτώ* is mentioned in our passage in connection with Leto, we must conclude that H. is referring to the 6th Nome.

Bibliography : Sethe, *RE* III, 1086 ff.; id., *Urgeschichte*, Index, s.v. Buto; Daressy, *RT* 30 (1908), p. 206; Edgar, *ASAE* 11 (1911), p. 87 ff.; Gauthier, *DG* Index, s.v. Bouto; Ball, *Egypt in the Classical Geographers*, Index, s.v. *Butô*, Butô; *PM* IV, p. 45; Drioton, *BIE* 25 (1943), p. 15; Gardiner, *AEO* II, pp. 64*, 182*, 187 ff.*, 196*; Bonnet, *RÄRG* p. 129 ff.; Montet, *DG* I, p. 91; Kees, *Ancient Egypt*, Index, s.v. Buto; Spiegelberg-Sethe, *ZÄS* 55 (1918), p. 90 ff.

τῇ Λητοῖ : Eg. *W3ḏt* (*Wb* I, p. 268, 17), the cobra goddess of *Dp* and tutelary goddess of L.E. and, therefore, of the Eg. Pharaohs as kings of L.E. On the identification vide Kolta, op. cit., p. 145 ff. For the *πανήγυρις* vide n. II, 63, 1.

ἐς Πάπρημιν πόλιν : H. (II, 59, 63, 71, 165; III, 12) and St. Byz. (s.v. *Παπριμίς*) are the only refs. in extant classical literature. However, *POxy* XI, 1380, 22 reads (*ἐν*) *Πεφρή*[*μι*] and the name *Παπρεμείθης* and variants are not uncommon (cf. Preisigke, *Namenbuch*, p. 277 ff.). The site of the city has been much debated. The evidence is as follows :

1. It lay on the westernmost branch of the Nile half way between the apex of the Delta and the sea and in the vicinity of Sais, Buto, Naucratis and Gynaecopolis. This information derives from two sources :

(a) H. mentions the *νομὸς Παπρημίτης* along with the nomes of the W. and middle Delta (II, 165).
(b) In *POxy* op. cit., 22 *Πεφρῆμις* is mentioned between the Gynaecopolitan Nome opposite Naucratis (vide Introduction, p. 25, n. 99) and Buto.

This evidence alone invalidates the ingenious but highly speculative attempt of Altenmüller (*JEOL* 18 (1964), p. 271 ff.; accepted Helck-Otto, op. cit., p. 268 ff.) to identify the city with Letopolis near the apex of the Delta.

2. Among the deities worshipped at Papremis were Isis, Hestia and Ares (*POxy* op. cit., 23; H., II, 63) and there was also a hippopotamus cult (II, 71).

3. Since there was a *νομὸς Παπρημίτης* we must assume that Papremis was the major city in the *νομός* to which it belonged.

In the relevant part of the Delta we find in the canonical nome list of Ptolemy VII (Gardiner, *AEO* II, p. 132* ff.) the 3rd, 5th (Saite), 6th (Choite) and 7th (Harpoon) Nomes of L.E. Of these the 5th can be removed immediately; for, as H. speaks of a *νομὸς Σαΐτης* in addition to a *νομὸς Παπρημίτης*, they cannot very well be identical. This leaves us with the 3rd, 6th and 7th of which the last is the strongest candidate. We know that the hippopotamus was worshipped there (Pleyte, *Drie Handschriften*, p. 5; Borchardt, *ZÄS* 41 (1904), p. 86) whereas nothing of the sort is exemplified for the others. Furthermore, Ares could be identified with Ḥorus who was worshipped on some scale in the 7th Nome (Gardiner, op. cit., II, p. 197 ff*), though in this case parallels are also available in the 3rd and 6th. We conclude, therefore, that the evidence at our disposal suggests that Papremis lay in the 7th Nome of L.E. Datum 3 is, of course, still a problem since, as far as we know, none of the major towns of the area bore a name remotely reminiscent of Papremis but we must allow for the possibility that the latter may be a name, like *Θῆβαι*, which was used by Gks. to refer to a city well known to us in Eg. under another name (Černy, *Archiv Orientální* 20 (1952),

p. 86 ff.). Alternatively we might argue that the eminence of Papremis was short lived and has, therefore, left no trace in Eg. sources.

Bibliography : Gauthier, *MIE* 25 (1935), p. 9; Kees, *RE* XVIII, 3, 1107; id., *Studi Rosellini*, II, p. 143 ff.; Bonnet, *RÄRG* p. 582 ff.; Černý, *Archiv Orientální* 20 (1952), p. 86 ff.; Gwyn Griffiths, *Conflict*, p. 87 ff.; Altenmüller, *JEOL* 18 (1964), p. 271 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 268 ff.

τῷ Ἄρεϊ : For Ares and his *πανήγυρις* vide II, 63 with n. ad loc.

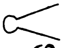
60. ἐς μέν νυν Βούβαστιν πόλιν ἐπεὰν κομίζωνται : According to the Edfu Festival List the main festivals at Bubastis fell on the 13th of the 2nd Month of *3ḫt*, the 13th of the 1st Month of *Šmw* and the 18th of the 2nd Month of *Šmw* (Chassinat, *Edfou*, I, p. 335, XVIII; for the division of the Eg. year vide n. II, 4). H.'s *πανήγυρις* ought to be one of these. Montet favoured the first on the grounds that *3ḫt*, the "Inundation Season", was a period of leisure and, therefore, ideal for such a feast (*DG* I, p. 178; cf. Sourdille, *Hérodote et la Religion*, p. 121) but this argument is fallacious since the Edfu List is based on the civil calendar and, therefore, the calendrical *3ḫt* would have had no permanent relationship with the natural season of high water (vide n. II, 4, 1). Much the most likely candidate is, in fact, the last, since the Edfu List also informs us that on the 1st of the 2nd month of *Šmw* Ḥatḥor of Dendera actually travelled to Bubastis (Alliot, *Le Culte*, I, p. 232). That would fit H.'s context perfectly. She was simply one of the participants, albeit divine, in the great Bubastite *πανήγυρις* (vide infra). The city had, however, several other festivals in honour of its patron goddess. According to the Canopus Decree (*OGI* I, 56, 61 ff. ~ *Urk* II, p. 138) the Greater and Lesser *Βουβάστια* took place on the *νουμηνία*, i.e. day 1 of the 2nd Month of *Šmw* at the time of the *συναγωγὴ τῶν καρπῶν καὶ ἡ τοῦ ποταμοῦ ἀνάβασις*. The Saite Calendar (Bilabel, *Neue Heidelberger Jahrbücher* N.F. 1929, p. 13) mentions a Β[*ου*]*βάστιος ἑο*[*ρτή*] on the 16th of the 2nd Month of *Šmw* as does the Esna Festival List (Bilabel, op. cit., p. 27, l. 15; Sauneron, *Esna*, V, *Les Fêtes Religieuses d'Esna*, p. 25). Elsewhere, we hear of a procession of Bastet at Karnak on the 29th of the 1st Month of *Prt* (Champollion, *Not. Des.*, II, p. 264), a procession at Herakleopolis on the 5th Day of the 4th Month of *Prt*

(Schott, *Festdaten*, p. 981) and a festival at Thebes on the 4th day of the 4th Month of *Prt* (Schott, op. cit., p. 980 ff.).

πλέουσι ... ἑκάστῃ βάρι : The river would not only have been covered with individual parties but also by splendid ceremonial *ẖn*(*w*)*t* "Schiffsprozessionen" (*Wb* III, p. 375, 7-12; cf. Bonnet, *RÄRG* p. 613 ff.; Wolf, *Das schöne Fest*, p. 47, fig. 6) as deities such as Ḥatḥor (vide supra) wound their stately way to Bubastis in their divine barks to participate, like their worshippers, in the famous *πανήγυρις* of Bastet. In the Festival of the "Beauteous Re-Union" of Ḥatḥor of Dendera and Ḥorus of Edfu the flotilla of Ḥatḥor was joined *en route* by the municipal barks of Elephantine, El Kab and Komir (Alliot, op. cit., II, p. 447 ff.). For the use of the river in pilgrimages vide Helck, *Urk. 18 Dyn.*, 1833.

βάρι : Cf. II, 96, 5. Eg. *br*(*Wb* I, p. 465, 8-9); Copt. ⲃⲁⲁⲣⲉ (?) (Crum, *CD* p. 42, a). The word is unknown until the XVIIIth Dyn. The Gk. version occurs first as local colour in A. (*Supp* 874). As freighters these ships are mentioned *P. Harris* 77, 10, *Wenamun* 2, 7 and 2, 15 and Caminos, *LEM* p. 156 (6, 11) where he translates "scow". For further details vide Torr, *Ancient Ships*, p. 106 ff.

αἱ μέν τινες ... ἀείδουσι : For the importance and significance of music in Eg. religious festivals see n. II, 48, 2. For a goddess of joy assimilated to Ḥatḥor like Bastet such a feature is particularly suitable.

κρόταλα ἔχουσαι : "Clappers" (*LSJ* p. 998, b, *κρόταλον* I) described by Schäffer, as a "tige unique de métal qui se reploie en forme de pincettes et porte à chaque extrémité une petite cymbale" (*Origine des Instruments*, p. 56; cf. Hickmann, *CGC. Instruments de Musique*, p. 34 ff.). In Greece they consisted of two pieces of movable material e.g. split reeds (Schol. Ar., *Nu* 260) or bronze (E., *Cyc* 205) played with the hands (Schol. ad Ar., l.c.; *AP* V, 175, 8) particularly in orgiastic cults such as those of Dionysus and Cybele. The fully developed Gk. metal *κρόταλον* was shaped thus  (Abert, *RE* XI, 2019; Wegner, *Das Musikleben der Griechen*, p. 62 ff.; Ziegler, *KP* III, 364; Klein, ib., 1495; Wießner, *Artemis Lexikon*, 2030 ff.). Pictures (Wreszinski, *Atlas*, I, pl. 419) and material evidence (Hickmann, *ASAE* 49 (1949), p. 517 ff.; id., *CGC.* op. cit., p. 32 ff.) prove that they were used in Egypt in Pharaonic and Coptic times, though the Eg. name has not been identified (Hickmann, *BIE* 36 (1955), p. 616).

οἱ δὲ αὐλέουσι : *αὐλός* "pipe, flute, clarionet" *κατὰ* *LSJ* (p. 277,a, *αὐλός* I). In fact the Gk. *αὐλός* was not a flute at all but an instrument with either a single or double reed, hence comparable with our clarinet and oboe (v. Jan, *RE* II, 2416 ff.; Vetter, *RE* XVI, 853; Wießner, op. cit., 2029; Schlesinger, *The Gk. Aulos*; Wegner, op. cit., p. 52 ff.; Winnington-Ingram ap *Grove's Dictionary of Music*^{5}, III, s.v. Greek Music (Ancient), Aulos; Boetticher, *KP* I, 755 ff.). The Egs. commonly used three types of wind instrument—the reedless long flute (Eg. *mꜣt* (*Wb* II, p. 6, 8-10; Gk. *μόναυλος*, *κάλαμος*; mod. nây; Hickmann, *BIE* 36 (1955), p. 617); the *wꜣnr* reed pipe (*Wb* I, p. 252, 1) was smaller but based on the same principle); the double clarinet (Eg. *mmt* (*Wb* II, p. 59, 1); Hickmann, l.c.) which had one reed; and the double-reeded oboe (Eg. *wḏnỉ* (*Wb* I, p. 409, 9) which does not occur until the N.K. and was usually played in pairs held in a V-shape. For surviving examples of these instruments cf. Hickmann, *CGC.* op. cit., p. 115 ff. with pl. LXXXII-LXXXVI and in general *CdE* 26 (1951), p. 17 ff. As H. implies, these instruments were usually played by men (Brunner-Traut, *Der Tanz im alten Ägypten*, passim).

καὶ τὰς χεῖρας κροτέουσι : Cf. Klebs, *AR* p. 111; *LD* II, pl. 53a. Handclapping was an essential part of Eg. music and dancing, serving not only to mark rhythm but also to impart *color*. Its origins are lost in antiquity but it certainly formed the only accompaniment of early cult dances. It has close parallels in black Africa and is still found in Egypt today. It was clearly a complex art, much esteemed and carefully studied. It was usually confined to women and its practitioners normally formed a group apart from the dancers, though pluralism is not unexemplified.

Bibliography : Brunner-Traut, *Der Tanz im alten Ägypten*; Hickmann, *BIE* 37(1) (1956), p. 67 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, pp. 140, 371.

αἱ δὲ τωθάζουσι ... τὰς ἐν τῇ πόλι ταύτῃ γυναῖκας : Paradoxically this mockery was probably intended to benefit the recipients; for by making the latter appear less enviable it helped to ward off the evil eye (cf. the *ioci militares* at a triumph, Ehlers, *RE* VIIA, 1, 496, 509 ff. and the *Fescennina iocatio* at Roman marriages, Fordyce, *Catullus*, p. 247 ff.). On the same principle curses were used in Greece to ensure good crops (Thphr., *HP* VII, 3, 3; Plin., *HN* XIX, 120; Plu., *Quaest Conviv* VII, 2 (*Mor* 701)). In general vide Frazer, *GB. Taboo*, p. 154; ib., *The Magic Art*, I, p. 278 ff.; Crawley, *HERE* IX, p. 441 ff.

αἱ δὲ ὀρχέονται : Dancing was of great importance in the divine cult and, apart from being a natural expression of joy (e.g. *Urk* IV, 259, 24 ~ *BAR* II, § 238), served several religious functions. It could be used to delight the heart of the deity (Wreszinski, *Atlas*, II, pl. 193-194; v. Bissing, *Re-Heiligtum*, III, pl. 16) or to soothe angry and fearful gods (Mariette, *Dendérah*, IV, pl. 2; Junker, *Hathor-Tefnut*, p. 84). It could also be mimetic, imitating a mythical event, often with dancers acting the rôle of gods (Lucianus, *Salt* 59 (299); Davies, *Antefoḳer*, p. 22 + pl. 23, 23a-b; Gauthier, *Les Fêtes du Dieu Min*, pp. 63, 188). Furthermore, by lessening the devotees' sense of individuality, it facilitated a sense of absorption in the divine (Crawley, *HERE* X, p. 359 ff.). H.'s statement that it was the women who danced and not the men corresponds to the general practice of the ancient Egs. (Brunner-Traut, op. cit., p. 81), though male dancers do occur (in general Bonnet, *RÄRG* p. 766 ff.).

αἱ δὲ ἀνασύρονται ἀνιστάμεναι : i.e. they raise up their skirts and display their *pudenda*. This rite took place at Esna in the presence of the cult statue of Ḥatḥor with whom Bastet had close connections (Sauneron, *Esna V. Les Fêtes Religieuses d'Esna*, p. 41 ff.) and before the Apis Bull (D.S., I, 85). It is also represented in many Graeco-Egyptian terracottas (Hogarth-Lorimer-Edgar, *JHS* 25 (1905), p. 128, n. 4; Perdrizet, *Les Terres Cuites Grecques d'Égypte*, pl. V, LXXXII, LXXXIV-LXXXV, C, CIII; Weber, *Die ägyptisch-griechischen Terrakotten*, p. 119, fig. 77-8, pl. 18, 185-6; Breccia, *Monuments de l'Égypte Gréco-Romaine. Terrecotte Figurate Greche*, I, pl. LIV ff.). As statues of this appear to be confined to Egypt, they probably depict a peculiarly Eg. rite (Perdrizet, op. cit., p. 54 ff., no. 157). In the rituals of Ḥatḥor and the Apis Bull the worshippers obviously intended to assimilate the deity's fertilizing power but in the present case the context makes such an interpretation impossible. It seems probable that we are faced with primitive agricultural magic in which the people in the boats intend by exposure of their genitalia to impart fertility both to their counterparts on the bank and to their fields. This view is strengthened by the probably apotropaic nature of the ritual of mockery (vide supra) and the fertility aspects of Bastet in whose honour the *πανήγυρις* was celebrated (vide infra, p. 299). Bilabel's comment "Der Sinn des Festbrauches auf der Fahrt kann nur der gewesen sein, eine orgiastische Stimmung für das Fest der Freudengöttin zu erzeugen, bei dem das geschlechtliche Moment eine Rolle gespielt hat" (op. cit., p. 34) seems superficial.

καὶ οἶνος ἀμπέλινος ... τῷ ἐπιλοίπῳ : On wine vide n. II, 77, 4. Where the motive of the festival permitted there was a tendency for abandoned revelry to break out (cf. *Urk* IV, 688; Černý, *BIFAO* 27 (1927), p. 183 ff.; Wolf, *Das schöne Fest*, p. 56; Drioton, *Les Fêtes Égyptiennes*, p. 8 ff.; beer at the festival of Amūn, Gardiner, *ZÄS* 42 (1905), p. 27 ff.; cf. Kees, *Ägypten*, p. 66). In fact, festival days are sometimes described as "Days of Drinking "(Erman, *SPAW* 1910, p. 345). Drunkenness is even found in festivals of the dead (Schott, *Das schöne Fest vom Wüstentale*, p. 82). It was certainly a feature of the festivals of Bubastis as the basically joyful character of Bastet and her Ḥatḥorian connections would suggest. The festival of Ḥatḥor at Medamoud included drinking (Drioton, *Rapport sur les Fouilles de Medamoud (1926). Les Inscriptions*, p. 27) while the best known of all is the "Feast of Drunkenness" in honour of the same goddess at Dendera (Junker, *ZÄS* 43 (1906), p. 102; Alliot, *Le Culte*, I, p. 239). In modern times a licentious festival was held at Tanta near Bubastis in honour of the birthday (*Mûlid*) of the great saint Sejid-el-Bedawi. The feast took place in August, though two smaller celebrations occurred in March and January (Lane, *MCME* p. 246 ff.; Hopfner, *Tierkult*, p. 36, n. 3).

συμφοιτῶσι δέ ... ὡς οἱ ἐπιχώριοι λέγουσι : Vide II, 59. The festival of the birth of Sejid-el-Bedawi (vide supra) often drew as many as half a million visitors.

61. ἐν δὲ Βουσίρι πόλι ... εἴρηται πρότερόν μοι : Cf. on II, 40, 59, 1. The festival and the rite of lamentation were, in fact, concerned with the death of Osiris (Sethe, *RE* III, 1073 ff.; Sourdille, *Hérodote et la Religion*, p. 90; Kolta, *Die Gleichsetzung*, p. 43), though the rites were allegedly established by Isis (D.S., I, 20; Plu., *DIO* 27 (*Mor* 361)). The temple of Osiris, like that at Abydos, was a place of pilgrimage (Newberry, *Beni Hasan*, I, pl. XVI; Gardiner *AEO* II, p. 178*; Yoyotte, *Les Pèlerinages*, pp. 28, 32 ff., 39 ff.).

τύπτονται ... μυριάδες κάρτα πολλαὶ ἀνθρώπων : Beyond doubt the Festival of Khoiak (Moret, *Les Mystères Égyptiens*, p. 14; Drioton, *Les Fêtes Égyptiennes*, p. 18 ff.; Bonnet, *RÄRG* pp. 495, 574; Chassinat, *Le Mystère*, p. 9 ff.). The ritual contained two elements :

(a) Funerary. Original.
(b) Fertility. Secondary.

(a) This took the form of ritual re-enactment of the final stages of the myth of Osiris and depicted the search for the fragmented body, its recovery, the rites of embalmment and lamentation, the triumph of Ḥorus over Seth and his confederates and the resurrection and establishment of Osiris as King of the Dead (Junker, *Stundenwachen*, p. 2; Chassinat, op. cit., p. 23 ff.).
(b) These events were related, in later times at least, to the sowing and sprouting of the corn after the retreat of the flood-waters and consequently took place between the 18th and 30th of the 4th Month of Akhet (called the Month of Khoiak from the N.K.) and the last of the Inundation Season.

Reconstruction of the ritual is fraught with difficulties but for H.'s period a plausible interpretation based on the studies of Gaballa and Kitchen (*Orientalia* 38 (1969), p. 34 ff.) and Chassinat (*Le Mystère*, passim) would run as follows :

Day 18-25. The Festival starts when Osiris is already dead (Gaballa and Kitchen, op. cit., p. 40, n. 1 is surely the correct interpretation). Two figures are made

(i) The so-called corn-mummy—the *Ḫnty-'Imntyw*. It is Osirid, made of mud and corn and sedulously watered (Chassinat, op. cit., p. 41 ff. with Col. 14-20; cf. Gwyn Griffiths, *Origins*, p. 109 ff.).
(ii) The figure of Sokar-Osiris, made of earth, date-paste, incense,

terebinth-resin, perfumes and pulverized precious stones (Chassinat, op. cit., pp. 41; 270 ff., Col. 33-5). This served as the cult image.

Day 22. *Ḫbs Tꜣ* Feast. The earth is hoed and fertilized with the blood of Osiris' foes. We must, then, imagine that Seth and his confederates have been overthrown in battle by Ḥorus (Gaballa-Kitchen, op. cit., p. 39 ff.).

Day 23. "Preparing the Way in the *Štyt* Shrine"—probably the *Prt ʿꜣt* "Great Procession" in which the body is brought to the place of embalmment. This was a time of mourning for the death of Osiris (Gaballa-Kitchen, op. cit., pp. 24, 41; Gwyn Griffiths, *De Iside et Osiride*, p. 63; Daumas, *Les Moyens d'Expression du Grec et de l'Égyptien*, p. 176 ff.) and also of the ritual of the *Sštꜣ Ḥwt Nbw*, i.e. Embalmment of Osiris, carried out on the Sokar-Osiris figure (Chassinat, op. cit., p. 71). At this point in Graeco-Roman times took place the *Stundenwachen*, the nocturnal vigil over the body (Junker, *Stundenwachen*, passim).

Day 24. "Day of Placing Sokar in the Midst"—the ritual of laying the body of Sokar-Osiris in its coffin (Schott ap Nelson, *Work in Western Thebes*, p. 79; Gaballa-Kitchen, op. cit., p. 41). On the night of the 24th-25th took place the "Navigation of Osiris". This involved a procession to the Sacred Lake where the grave of Osiris doubtless lay (Bonnet, op. cit., p. 576 ff.) and re-enacted the ferrying of the mummy of Osiris to the tomb. The statue of Sokar-Osiris was buried on the same day at Dendera in Roman times. There it was left for a year and the Sokar-Osiris of the year before brought forth (Chassinat, op. cit., p. 37).

Day 25. The *Nṯryt*—probably "Divinization" i.e. restoration of divine powers to Osiris (Gaballa-Kitchen, op. cit., p. 43). According to the Dendera ritual the *Ḫnty-ʾImntyw* was interred on this day. At the same time the "Songs of Isis and Nephthys" (Faulkner, *P. Bremner-Rhind*, p. 1 ff.; id., *JEA* 22 (1936), p. 121 ff.) and the "Lamentations of Isis and Nephthys" took place (id., *Mélanges Maspero*, I, p. 337 ff.).

Day 26. Festival of Sokar—the triumph of Sokar-Osiris. Ḥorus, the son of Osiris, has overthrown his father's enemies (Gaballa-Kitchen, op. cit., p. 45 ff.).

Day 27. "Anointing the Ennead"—possibly a feast celebrating the victory of Sokar-Osiris (Gaballa-Kitchen, op. cit., p. 71).

Day 28. "Day of Drawing forth the Benben". Since Osiris was identified with the soul (*Bꜣ*) of Rēʿ and since the *bnbn* was a solar fetish, this ritual may symbolize the resurrection of Osiris (Gaballa-Kitchen, op. cit., p. 71).

Day 29. Unknown Festival (Gaballa-Kitchen, op. cit., p. 72).

Day 30. Raising the Djed Pillar (on which see Bonnet, op. cit., p. 149 ff.; Kees, *Götterglaube*², pp. 97 ff., 165, 295; van de Walle, *La Nouvelle Clio* 6 (1954), p. 283 ff.) ... "the day of the final interment of Osiris (i.e. the Sokar-Osiris figure) to become king of the Netherworld leaving earthly rule to Ḥorus" (Gaballa-Kitchen, op. cit., p. 72 ff.; Chassinat op. cit., p. 73).

Clearly, the period of lamentation mentioned by H. ran from Day 23-25 of Akhet 4, though it lasted four days in Plu.'s time (*DIO* 39 (*Mor* 366)). This will have been succeeded by great rejoicing in the days immediately following.

τὸν δὲ τύπτονται, οὔ μοι ὅσιόν ἐστι λέγειν : *There is no implication here of μυστήρια in the Gk. sense.* "Secret rites" *Sštꜣw* (*Wb* IV, p. 298, 8-12) are mentioned at an early period (Lange-Schäfer, *CGC. Grab- und Denksteine des MR.*, p. 155, no. 20539, l. 7; Daressy, *RT* 10 (1888), p. 146; Schäfer, *Die Mysterien*, p. 59), those of Osiris being described as the *Sštꜣ n Nb ꜣbḏw* and taking place in the *Ḥwt Nbw*. It should, however, be remembered that the term does not have the associations of Gk. *μυστήρια* (Bonnet, op. cit., p. 494) but simply refers to rituals and cult objects which, as a matter of regular practice, were excluded from the sight of all but the priests. In Graeco-Roman times silence on all such sacred matters was carefully guarded : "I am a priest, instructed in the mystery, whose breast does not permit to emerge what it has seen" (Mariette, *Dendérah*, III, pl. 42o, 61b; cf. Chassinat, *Edfou*, IV, p. 55; id., *Dendara*, III, p. 16; IV, pp. 102, 247, 256; V, p. 94). Thus, while Chassinat may reasonably suggest (*Le Mystère*, p. 11) that H. had himself been initiated into the cult of Isis or Demeter in his own country where he had to observe a strict vow of silence, both he and Mallet (*Le Culte de Neit à Saïs*, p. 41) are quite wrong in suggesting as an added inducement that he had been initiated into their Eg. mysteries. H., like the Carians, may have attended the *πανήγυρις* and participated in the public rites but the sacred rites would have been kept resolutely from their sight. To speak of them as *μυστήρια* (as in II, 171, 1) is simply another example of *interpretatio Graeca.*

ὅσοι δὲ Καρῶν εἰσι ἐν Αἰγύπτῳ οἰκέοντες : Cf. Introduction, p. 14 ff.

οὗτοι δὲ μαχαίρῃσι : The ritual is associated in ancient tradition with the cult of Attis, the Phrygian counterpart of the Syrian Adonis, whose cult spread far and wide within and without Asia Minor. Attis was a dying god of vegetation whose death and resurrection each year were reflected in the changing seasons. The ritual of mourning at the Vernal Equinox was conducted by the Archigallus and the Galli who gashed themselves with knives and potsherds (*dies sanguinis*) and bespattered the altar and sacred tree with their blood, doubtless to strengthen the god for his resurrection. The similarity in legend and cult naturally led to the identification of Attis with Osiris.

Bibliography : Cumont, *RE* II, 2247 ff.; Frazer, *Adonis, Attis and Osiris*, p. 166 ff.; Showerman, *HERE* II, p. 217 ff.; Rapp ap Roscher, *ML* I, 715 ff.; Graillot, *Le Culte de Cybèle*, p. 12 ff.; Strathmann, *RAC* I, 889 ff.

62. ἐς Σάϊν δὲ πόλιν ... περὶ τὰ δώματα κύκλῳ : The close connection of torches with Athene/Neith is indicated by the large number of terracotta statuettes of the goddess carrying a torch, a quite un-Gk. attribute for Athene (Perdrizet, *Les Terres Cuites Grecques d'Égypte*, p. 68, no. 169 with LVIII-LIX; Weber, *Die ägyptisch-griechischen Terrakotten*, p. 109 ff.). The Saite Calendar Papyrus has the following entry for the month of Epiphi (*Šmw* 3, day lost) :

> *καὶ ἐν Σάι πανήγ[υρις] Ἀθηνᾶς καὶ λύχνους κάουσι κατὰ τὴν χώραν*

(*PHib* I, 27, p. 154; Bilabel, *Neue Heidelberger Jahrbücher* N.F. 1929, p. 14). A festival of Neith is mentioned in the Esna Calendar on the 13th of Epiphi (13th *Šmw* 3) (Bilabel, op. cit., p. 28; Sauneron, *Esna*. V. *Les Fêtes Religieuses d'Esna*, p. 245 ff.). Another *πανήγυρις* of Athene/Neith, without *λυχνοκαΐη*, was celebrated on the 19th Mecheir (19th of *Prt* 2) (*PHib* op. cit., p. 154, l. 76; Bilabel, op. cit., p. 13). The Cairo Calendar mentions a feast of the same goddess on the 11th of this month and probably on the 5th of *Prt* 3, the latter, if correct, being nocturnal (Bakir, *The Cairo Calendar 86637*, p. 109). There can be no doubt (*pace* Wiedemann, *Kommentar*, p. 261 ff.; Chassinat, *Le Mystère*, p. 9 ff. *et al*). that H. is referring to the *λυχνοκαΐη* of the 13th of Epiphi. The details of this ritual are given at Esna (the U.E.

Sais). It re-enacts the mythical arrival of Neith with her son Rēʿ at Sais after the creation of the world. In the evening the image of Neith was carried in the form of a cow (vide H., II, 129-132) to the quay of the city. It was then carried back to the temple while her triumph over the enemies of her son Rēʿ (Bebon, Apophis and their henchmen) was re-enacted. Her return to the temple marks/symbolizes the end of a period of disorder and this is consummated in the enthronement of the goddess and her son in the temple. The final stage of the festival is thus described.

> "Returning to her temple in peace. Words spoken by the prophets 'Hurray! Hurray! She has come in joy. Neith the great cow has come in peace! Hurray for her coming! Neith, the Great One, Mother of the God, Mistress of Esna, Merihyt-Nebtu, Mistress of Khentyto!
> Appearance of this goddess and of her divine college at her main seat.
> *Burning of torches in abudance within this temple.*
> Let men and women make festival!
> Let this whole city raise cries of joy, *and let none sleep until sun-rise*! Let Esna be in festival" (Sauneron, *Esna*, III, no. 207, 22-23; V, p. 302. S. compares H., II, 62).

Clearly the burning of torches is both symbolic of and a magical recreation of the annihilation of darkness and chaos achieved by Neith at the beginning of the world, during the battle against Apophis and the foes of light and order, and at her establishment together with her son in the temple at Sais.

τὰ δὲ λύχνα ... τὸ ἐλλύχνιον : Floating-wick lamps of this type are firmly attested for Ancient Egypt :

1. The hieroglyph (Gardiner, *Egyptian Grammar*^{3}, Sign List, R7) clearly represents such a lamp. The O.K. prototype is hemispherical (*PT* 606a).

2. Representations occur (Davies, *El Amarna*, II, pl. VIII; III, pl. VI, VII; IV, pl. XV; Forbes, *Studies*^{2}, VI, p. 144).

3. Graeco-Roman descendants of the type have been identified (Robins, *JEA* 25 (1939), p. 184 ff.).

4. Physical remains are extant though rare. O.K. graves have yielded stands of limestone 1-1½ m. high with granite dishes on top. M.K. pottery lamps of H.'s type were found at Kahun and the Turin Museum possesses examples of XXth Dyn. date which still contained the wick and

oil when discovered. They were equipped with wooden stands carved in the form of a papyrus stalk (Erman-Ranke, *Ägypten*, p. 217).

Strikingly similar are the *chirags* or open pottery lamps used for festival illuminations in India and types used in Nigeria. The Jews used a festival lamp in which seven wicks floated at one and the same time (Robins, op. cit.).

ἁλὸς : The salt prevented the oil from smoking (Černý, *The Valley of the Kings*, p. 54) and also imparted a bright yellow colour to the flame (Forbes op. cit., III, p. 167; VI, p. 147). The practice is also found in Palestine (Forbes, op. cit., VI, l.c.).

καὶ ἐλαίου : For Eg. oils see n. II, 94.

καὶ τῇ ὁρτῇ οὔνομα κεῖται λυχνοκαΐη : The sense seems at first sight a little odd but is perhaps best explained by the Graeco-centric nature of H.'s mind. The Gks. had been well acquainted with Sais and its customs since the 7th Century and the festival will have become generally known throughout the Hellenic World as the *λυχνοκαΐη*. H. is, therefore, able quite naturally to use the term as though it were the universal name. It simply does not occur to him that the Egs. may have had their own name. *Λ.* and *λυχναψίαι*, which are frequently mentioned in the papyri (Priesigke, *Sammelbuch*, III, 71999, 53; id., *Wörterbuch*, II, 43; Bilabel, op. cit., p. 44 ff.), constituted from an early period an important ingredient of Eg. festivals (Erman-Ranke, op. cit., p. 166; Sauneron, op. cit., p. 302(a); id., *MDAI*(*K*) 16 (1958), p. 276(c)).

καὶ οὕτω οὐκ ἐν Σάϊ μούνῃ ... ἀνὰ πᾶσαν Αἴγυπτον : Cf. the Saite Calendar, l.c.

ἔστι ἱρὸς περὶ αὐτοῦ λόγος λεγόμενος : The *ἱρὸς λόγος* is retailed at Esna whose myths and rituals were closely and explicitly modelled on those of Sais, so much so that "Esna" and "Sais" are interchangeable in the hieroglyphic text (Sauneron, op. cit., V, p. 249 ff.). The *λόγος* is a cosmogony, the most detailed known, in which Neith functions as the Demiurge and which gives the background to the Feast of Neith on the

13th Epiphi. We are told that she was born in darkness but that with her light came into being, followed by the primeval hill, which was believed to lie on the site of Sais itself. Next were created Egypt, the Sun (Rēʿ) and Apophis the Sun's arch-enemy. Neith then proceeded to take up residence in Sais, carrying Rēʿ on her horns, and during this progress defeated the enemies of order and light. The journey is described as follows :

> "And this is how she spent a time of four months in the cities of the Southern Land which is called *Ḫnty tꜣ*, occupied in smiting the enemies who rose up in hatred of Her Majesty. A flame shone before her in U. and L.E. When she reached Sais, on the evening of the 13th of Epiphi, there was a great and beautiful feast in heaven, earth and the entire land. She took then the form of the goddess *Wrrt*; she seized her bow in her hand, her arrow in her fist, and established herself in the Mansion of Neith, with her son Rēʿ. Then Rēʿ said to the gods who were with him 'Welcome Neith on this day; come and rejoice for her sake on this beautiful day; for she has brought me here, safe and sound. ***Burn torches before her! Make festival before her, until the dawn***' " (Sauneron, op. cit., III, no. 206, 13-15; V, p. 269 ff.).

63. ἐς δὲ Ἡλίου τε πόλιν : The mortuary texts frequently express the desire to make a pilgrimage to Heliopolis (Kees, *Totenglauben*, p. 112 ff. with fig. 3; Yoyotte, *Les Pèlerinages*, p. 28) but little is known of festivals there. It amounts to the following : (a) The most important were the "Festivals of Heaven" i.e. those connected with celestial phenomena (Kees, *Der Götterglaube*², p. 224 ff.; id., *Orientalia* 18 (1949), p. 430). We hear in particular of :

1. The Festival of the Pillar. This was raised amid festive ceremonies and offerings (Möller, *ZÄS* 39 (1901), p. 72; Chassinat, *Edfou*, II, p. 91, pl. 40i) and was often adorned with a bovine head and called "the Bull of Heliopolis" (Pillet, *ASAE* 23 (1923), p. 123). It was interpreted as a lunar symbol and later connected with Osiris (Bonnet, *RÄRG* p. 543 ff.).

2. *Wp rnpt* "Opening of the Year" or "New Year's Feast". There can be no doubt that this festival was celebrated at Heliopolis, though textual evidence seems to be lacking. It was certainly solar (cf. *P. Anastasi* I, 3, 5), being identical with the Feast of *Mswt Rʿ* "Birth of Rēʿ" which gave its name to the month ⲙⲉⲥⲱⲣⲉ (Copt.), *Μεσορή* (Gk.) (*Wb* II, p. 141, 13). The festival took place on the first day of the Civil Year i.e. Day 1 of

3ḫt 1 (Parker, *The Calendars of Ancient Egypt*, § 236; Gardiner, *ZÄS* 43 (1906), p. 142; id., *RdE* 10 (1955), p. 13; Schott, *Festdaten*, p. 959 ff.) and is mentioned often on that date (e.g. in the Dendera Calendar at Edfu ap Alliot, *Le Culte*, I, p. 242 in connection with Ḥatḥor and Rēʿ). As we should expect, λυχνοκαΐαι were prominent (*BAR* I, § 545).

3. *'Išd* Festival. This festival, celebrated on the 30th of *Prt* 1, was concerned with the sacred *išd* tree at Heliopolis and connected with the Filling of the Sacred Eye (Edwards, *HTBM* p. 47 ff., pl. 39).

(b) It is possible that the Muslim Khâlig Festival "the Cutting of the Dyke" at Cairo at the height of the inundation had a Pharaonic prototype. It took place in the Copt. month Mesore and was well attended (Lane, *MCME* p. 498 ff.; Palanque, *Le Nil*, p. 84 ff.). It may be mentioned as "the Opening of the Mouth of the *'Ity* Canal" in *P.Harris* 500 (2, 13-15; Müller, *Die Liebespoesie der alten Ägypter*, pl. 4-7; Yoyotte, *Les Pèlerinages*, p. 48, n. 4).

There is not enough information to determine which, if any, is the πανήγυρις of H.

καὶ Βουτοῦν : According to the Stele of Gemenafḥarbok (Drioton, *BIE* 25 (1942-3), p. 1 ff.) pilgrims came to Buto on three occasions :

1. Every month at the full moon.
2. Every year at the Festival of Ḥorus (12-17th of *Šmw* 2 (Payni)). This was originally celebrated in honour of Wadjet/Leto.
3. In time of famine when the king performed the ritual there.

2 is probably the πανήγυρις of H.; for the other πανηγύριες mentioned in II, 59, where identifiable, are annual. H.'s ascription to Leto disagrees with the Eg. document but probably reflects the importance of the goddess in the festival (cf. II, 61) and H.'s firm conviction that Wadjet/Leto was the major deity of the city. The pilgrimage mentioned in mortuary texts is concerned with the famous Butic Burial and is hardly that to which H. refers (cf. Yoyotte, op. cit., p. 28 ff.; Kees, *Totenglauben*, pp. 111, 243; Junker, *MDAI(K)* 9 (1940), p. 1 ff.; Vandier, *CdE* 19 (1944), p. 35 ff.; Desroches-Noblecourt, *Kêmi* 13 (1954), p. 33 ff.).

θυσίας μούνας ἐπιτελέουσι φοιτῶντες : Untrue of Buto at least. A ritual battle took place there which bears close similarities to that of Papremis (vide infra).

Παπρήμι : Vide n. II, 59, 3.

εὖτ'ἂν δὲ γίνηται καταφερὴς ὁ ἥλιος ... νενομικέναι φασί : The nature of this ritual fight has given rise to much argument, fundamentally because it is impossible to identify Ares with absolute certainty. Ḥorus is an obvious candidate in view of his warlike character and his importance in the 7th Nome of L.E. where Papremis probably lay (n. II, 59, 3) and there is a temptation to follow Altenmüller (*JEOL* 18 (1964), p. 276 ff.), at least in a very general way, in connecting H.'s account with the Haroeris/Onuris-Tefnut complex of myth but, in the present state of our knowledge, the evidence is nowhere near being conclusive. Whatever the details, however, there is no doubt that H.'s account is essentially accurate; for it is well within the spirit of Eg. Religion :

1. Ritual battles are well known :

(a) At Abydos in honour of Osiris (Sethe, *Lesestücke*, p. 70 ff.).
(b) During the ritual of the raising of the *Ḏd* Pillar. The combatants in both known representations used cudgels though they are made of papyrus stalks (Brugsch, *Thes.*, p. 1190; Fakhry, *ASAE* 42 (1943) pl. 39 ff., p. 484).
(c) At Buto in connection with Min. The ritual fight bears some resemblance to that described by H. (Drioton, *Les Fêtes de Bouto*, p. 6; id., *Les Fêtes Égyptiennes*, p. 10 ff.).
(d) At Letopolis in the cult of Ḥorus (Sethe, *PT* 908d-e; id., *Dramatische Ramesseumpapyrus*, ll. 113 ff.).

It is worth remembering that combats with sticks are well authenticated in other contexts though their exact purpose is a matter of debate (Wilson, *JEA* 17 (1931), p. 211 ff.).

2. The violation of the mother by her son is exemplified several times in Eg. mythology, e.g. Geb violates his mother Tefnut (Goyon, *Kêmi* 6 (1936), p. 1 ff.; Roeder, *Rel. Urk.*, p. 153); Ḥorus violates Isis (Lange *SPAW* 1927, p. 332, 12 ff.; id., *Der magische Papyrus Harris*, VII, 8 ff.; Barns, *Five Ramesseum Papyri*, pl. 18, p. 27); Min frequently (*Wb*

II, p. 81, 16; in general Jacobsohn, *Die dogmatische Stellung des Königs*, p. 13 ff.).

Bibliography : Lawrence, *The History of Herodotus*, p. 178; Hornblower, *Man* 37 (1937), p. 174; Bonnet, *RÄRG* p. 582; Gwyn Griffiths, *Conflict*, p. 92 ff.; Altenmüller, *JEOL* 18 (1964), p. 271 ff.

τὤγαλμα : "Cult-statue" (vide n. II, 4, 2).

νηῷ : *Νηός* is a general word for shrine whether it be that in the Holy of Holies, which was not designed to be moved, the portable shrines used in the cult or small shrines which contained little statues for private worship. The differences appear in size and material. The first class consisted of *νηοί* which were large and often made of stone. The other two classes were smaller and made of wood, pottery, faience or some other relatively light material. For an excellent and representative collection vide Roeder, *CGC. Naos*, passim. In the present case it is the second class which is involved. Such shrines are very often laid on boats (cf. Mariette, *Abydos*, I, pp. 63-4, 70-1; Naville, *Saft el Henneh*, pl. 2; Parker, *Saite Oracle Papyrus*, p. 4, fig. 1) which usually have figure-heads indicating the owner e.g. Amūn's boat has a ram figure-head. Such shrines were kept in a special room in the temple which had a processional way around it. In the centre of the room was a stand on which they were placed when not in use. They were normally carried by means of carrying-poles but could be pulled along on sleds and rarely on wheeled vehicles. It is probable that *προεκκομίζουσι* refers to the first method.

ξυλίνῳ κατακεχρυσωμένῳ : A number of surviving *νηοί* or fragments of *νηοί* indicate that this was not uncommon, e.g. Roeder, op. cit., no. 70024; the naos of King Ḥor (de Morgan, *Dahchour*, I, p. 91 ~ Roeder, op. cit., no. 70035).

ἕλκουσι τετράκυκλον ἅμαξαν ... : There is no mention of this when the *ἄγαλμα* was first taken from the *ἱρόν*. For some reason on the return journey the method of locomotion appears to have been changed. The use of wheeled carts does not occur before the XVIIIth Dyn. but is attested sporadically from that time. The evidence includes :

1. Representations—Rawlinson, *Herodotus*, II, p. 108 (a picture on the bandages of a mummy belonging to Signor d'Athanasi which depicts a four-wheeled cart carrying a shrine which contains a mummy); L*D* V, pl. 41a (Ethiopian); Lefebvre, *Le Tombeau de Petosiris*, I, p. 129 ff.; III, pl. XXX; Mariette, *Monuments Divers*, pl. XXXV (the Apis Bull is carried in a shrine which runs on several wheels); Schäfer, *Von ägyptischer Kunst*, pl. 24, 1 (XVIIIth Dyn., the earliest representation known); Fakhri, *Siwa*, p. 144, fig. 24; Weber, *Terrakotten*, II, p. 255 ff.

2. Textual evidence. Although the text is not over-explicit, the shrine mentioned in Drioton, *Les Fêtes de Bouto*, p. 6 must surely have been placed upon a wheeled cart and probably bore a close resemblance to that described by H.

3. Models. There is no model of a cart carrying a shrine but models do exist of boats running on four wheels which give us some idea of what the objects described by H. must have looked like (v. Bissing, *Thebanischer Grabfund*, p. 19 ff., pl. X).

συμμεῖξαι : Two meanings are possible :

(a) "Have intercourse with" (cf. IV, 114).
(b) "Commune with" (cf. I, 123, 2; VI, 23, 2 etc.).

Full treatment Powell, *Lexicon*, pp. 342 ff.

(a) has found much favour (Wiedemann, *Kommentar*, p. 266; How-Wells, *Commentary*, I, p. 198; Gwyn Griffiths, op. cit., p. 86). Wiedemann justified this interpretation by arguing that the next chapter was intended to allay any suspicions people might have after the mention in Ch. 63 of sexual intercourse while Gwyn Griffiths (l.c.) argues for the first on the ground that *μίσγομαι* (II, 64, 1) has that meaning. This argument suffers from the slight disadvantage that the words are not quite the same but surely it is, in fact, correct. H. has placed his discussion of the taboo on intercourse at this particular point in Bk. II simply because the topic has just been suggested by Ch. 63.

64. καὶ τὸ μὴ μίσγεσθαι γυναιξὶ ἐν ἱροῖσι : Cf. Clem. Al., *Strom* I, 16, 2. *BD* CXXV, Intro. B12 (Budge) we read *n dꜣdꜣ·ỉ* (*m wʿbt nṯr*(*·ỉ*) *nỉwty*) "I have not copulated (in the Pure Places of my city god)".

Abstinence from sexual intercourse during the period of service was obligatory for priests in the Graeco-Roman Period—"Do not frequent the place of women. Do not do there what ought not to be done" (Alliot, *Le Culte*, I, p. 185 ff.; cf. Porph., *Abst* IV, 6-8). Similarly the practitioner of magic had to abstain from intercourse (*BD* LXIV). Ecclesiastical depravity is, however, exemplified (Maspero, *L'Archéologie Égyptienne*, p. 172; Keimer, *Études*, III, p. 6), presumably outside the boundaries of the temple. Str. (XVII, 1, 46 (C816)) speaks of temple harlots at Thebes in his time. Hopfner (*Tierkult*, p. 95 ff.) is sceptical (cf. H., I, 182) but there are, in fact, some slight indications of temple prostitution in Ptol. times possibly due to Persian influence (Bouché-Leclercq, *Histoire des Lagides*, III, p. 205 ff.; IV, p. 123 ff.; Thompson, *Actes du V^{e} Congrès International de Papyrologie*, Bruxelles, 1938, p. 497 ff.; id., *JEA* 26 (1940), p. 68 ff.; Delekat, *Katoche, Hierodulie und Adoptionsfreilassung*, pp. 65, 68, 70 ff.).

μήδε ἀλούτους ... ἐσιέναι : There is good evidence to support this statement :

1. In the Westcar Papyrus the Citizen regularly bathed after intercourse with the wife of Ubaoner (Erman, *Märchen des Pap. Westcar*, pl. II, ll. 10-12, 24 ff.; pl. III, l. 13).
2. A Ptol. inscription lays down the dues which must be paid to regain purity after sexual intercourse, birth, miscarriage, menstruation etc. (Miller, *RA* 3 Series 2 (1883), p. 181 ff.; cf. Baillet, ib., 3 Series 13 (1889), p. 70 ff.).
3. Porph. (l.c.) states that it was necessary for priests to purify themselves after a nocturnal emission.
4. Men in modern Egypt are very scrupulous about purifying themselves after sexual intercourse or a nocturnal emission. They always wash the genital organs and sometimes take a bath (Blackman, *HERE* X, p. 477).

These proscriptions arise because of the widespread association of sexual intercourse with impurity (*τὰ ἀφροδίσια μιαίνει* Porph., op. cit., IV, 20; Fehrle, *Die kultische Keuschheit im Altertum*, p. 25 ff.). In Egypt the emitting phallus is used as a determinative for impurity (Gardiner, *Egyptian Grammar*^{3}, Sign List, D53). Amongst the Jews sexual intercourse was considered to confer impurity (*Sam* I, 21, 1 ff.; *Deut* 23, 10) while Muslims on the pilgrimage to Mecca are forbidden sexual intercourse (Robertson-Smith, *Religion of the Semites*, p. 454). The psychological basis of this idea may simply be the physical uncleanness involved (Nilsson, *GgrR* I, p. 93) but it is worth remembering that sexual activity was considered a rich field for the working of demonic powers. Since demons entered the body by the natural orifices, sexual intercourse would facilitate the transfer of demons from one body to another. Thus, until purification rites were carried out, there was always the chance that the body of a person who had just had intercourse was contaminated by demonic powers. It would be a natural extension to regard the whole act as unclean and to be avoided in sacred places (cf. Fehrle, op. cit., p. 36 ff.).

οἱ μὲν γὰρ ἄλλοι σχεδὸν πάντες ἄνθρωποι ... ἐσέρχονται ἐς ἱρόν : This statement is based on the practice of temple prostitution which was widespread in the N.E. and Asia Minor :

1. *Canaanites*. Ritual prostitutes, both male and female (קְדֵשִׁים קְדֵשׁוֹת *q^e^dhēšîm*, *q^e^dhēšôth*). Cf. Pinches, *HERE* III, p. 497 ff.; Barton, ib., VI, p. 675 ff.

2. *Babylonia*. Male and female hierodules (*qadišu*; *ištaritu*; *ḫarimtu* etc.). They are connected with Ishtar, Marduk, Shamash, Adad etc. Cf. H., I, 199; Str., XVI, 1, 20 (C745); Athenag., *Adv. Graecos* 30; Pinches op. cit., p. 498; Barton op. cit., p. 673 ff.; Dhorme-Dussaud, *Les Religions Anciennes Orientales*, II, pp. 213, 219.

3. *Phoenicians*. Connected with Adonis at Byblos (Lucianus, *Syr D* 6) and Ishtar/Aphrodite at Paphos (H., I, 199), Citium where male prostitutes occur (*CIS* I, 86) and Eryx (in honour of Aphrodite, Str., VI, 2, 6 (C272)). Cf. Hogarth, *HERE* VI, p. 672; Barton, op. cit., VI, p. 672 ff.

4. *Cappadocia* (Str., XII, 2, 3 (C535)).

καὶ Ἑλλήνων : The Gk. attitude to intercourse as a source of impurity was very strict. Intercourse within the temple was regarded as an extremely heinous sin (Paus., VII, 19, 1-6; Ov., *Met* IV, 798 ff.; X, 686 ff.; Apollod., III, 9, 2). Adulterers were permanently excluded from temple worship (D., *In Neaer* 85 ff.; cf. Stob., *Flor* 74, 61). Sexual purity was demanded at Eresus (Paton, *CR* 16 (1902), p. 290) and of the visitors to the altar of Zeus Kynthios and Artemis Kynthia on Delos (de Prott-Ziehen, *LGS* II, 1, 91-2). In fact Plu. recommended abstinence for several days before visiting a temple (*Quaest Symp* III, 6, 4 (*Mor* 655)). Chastity was demanded of many officiants in Gk. temples (Fehrle, op. cit., pp. 98 ff., 155 ff.), sometimes throughout their lives (Plu., *Num* 9; Paus., IX, 27, 6; Lucianus, *Tim* 17 (128) + Schol. ad loc.), sometimes for their term of office (Plu., *De Pyth Orac* 20 (*Mor* 403-4); Hogarth, op. cit.), sometimes for a short time before discharging their duties in the temple (D., XXII, 78; LIX, 78). Even the garment in which a person had had intercourse could not be worn in the temple (Iamb., *VP* 153). It was the general custom to wash after intercourse (Hes., *Op* 733 ff.; *SIG* 1042; *SEG* IX, 72) as it was amongst the Romans (Suet., *Aug* 94; Tib., II, 1, 11 ff.; *Priap* XIV; Serv. ad Verg., *Aen* II, 201). For all these regulations, however, hierodules are found in the Gk. world at least in the cult of Aphrodite at Corinth (Str., VIII, 6, 20 (C378); Pi., F.107 (Bowra)).

Bibliography : Farnell, *HERE* X, p. 485; Stengel, *Gr. Kultusaltertümer*, pp. 36 ff., 231 ff.; Fehrle, *Die kultische Keuschheit im Altertum*; Nilsson, *GgrR* I, p. 93 ff.

νομίζοντες ... οὐκ ἂν ... ποιέειν : Criticism of the illogicality of cult practices was probably common in the 5th Century, cf. Heraclitus' criticism of the logical inconsistency inherent in blood sacrifice *καθαίρονται δ'ἄλλως <αἷμα> αἵματι μιαινόμενοι οἷον εἴ τις εἰς πηλὸν ἐμβὰς πηλῷ ἀπονίζοιτο. μαίνεσθαι δ'ἂν δοκοίη, εἴ τις αὐτὸν ἀνθρώπων ἐπιφράσαιτο οὕτω ποιέοντα* (*KR* 244 ~ *DK* 22, B5) as well as in the ritual of the mysteries (*KR* 245) and the Dionysia (ib., 246). Hippocrates' attack on *καθαρμοί* etc. (*Morb Sacr* I) and the Pactyes Episode ap H. (I, 157-60) are in the same spirit. The argument in the present passage may well have been used in H.'s time against the Gk. prescriptions on sexual purity only to be taken over by H. for the quite different purpose of explaining barbarian practices. The explanation is, of course, incorrect, though it is to H.'s credit that he asks "Why?" at all. The practices in question are of such antiquity that we cannot suppose that they arose from such cold-blooded reasoning. The solution will lie elsewhere :

(a) Many of the so-called temple harlots were not professionals but simply sold themselves once (I, 199). This practice springs from the idea that the first intercourse is extremely dangerous because demonic forces were particularly anxious to take this first opportunity to enter the maiden. Thus often the *ius primae noctis* lay with the ruler or priest, who possessed the magical power to deal with the demons, or with strangers (cf. *δεῖ ... ξείνῳ*, H. l.c.) or slaves. In some cases the stranger was considered to be the embodiment of the god (Fehrle, op. cit., p. 40 ff.). The emission of blood was also a source of fear (Fehrle, op. cit., p. 42, n. 2).

(b) Barton (*HERE* VI, p. 676; cf. Fehrle, op. cit., p. 42) considered that the ancient hierodules were to be explained as a development of the old custom of giving the bride to a king or priest and that the practice was intended to ensure the blessing of fertility. Both temporary and permanent hierodules, whether male or female, were embodiments of the deity and intercourse with them produced virility, fertility and remarkable children (cf. *Genesis* 30, 2, 6, 24). H.'s account of the practices in the cult of Mylitta/Aphrodite (I, 199) makes it clear that this was the concept operating there.

In these twilight regions of the human psyche it is advisable not to intellectualize too much. It is probable that both views contain a measure of truth.

65-76. Animal worship and Zoology of Egypt, subjects rich in *θώματα* (Introduction, p. 141 ff.).

65. Introductory comments on animal worship.
66. Cats.
67. Burial of sacred animals.
68-70. Crocodile. Natural history. Cult. Mode of hunting.
71. Hippopotami. Cult and natural history.
72. Sacred aquatic animals.
73. Phoenix.
74. Horned Vipers.
75. Flying serpents.
76. Ibises. Natural history and cult.

The origins of animal worship, even of the curiously fossilised Eg. form, must be sought in the psychological conditions inherent in a comparatively low level of culture. In earliest times, wherever man went, in almost every waking action, he encountered phenomena which confronted him as the expression of an all-pervading, omnipresent power, whether it be in strangely-shaped inanimate objects, plants, animals or certain peculiarly endowed people. Such an experience might be compounded of various elements—respect, gratitude or fear—but whatever its nature, he was compelled to define his relationship towards it and in particular to control and manipulate it. Naturally, however, in a hunting or primitive agricultural economy, the close association with animals meant that this power confronted man particularly in their form. They became, consequently, the chief object of his efforts at manipulating supernatural power which is by far the most important aspect of primitive religion.

This *religio* could be excited by various aspects of the power. In the case of useful animals it might be experienced as beneficent (e.g. cattle). In other cases the dominant element would be wonder and admiration, alloyed with envy, as in the uncanny instinct of certain animals (e.g. dogs or birds), which seemed to lead them unerringly to their goal, or the faint speck of a falcon wheeling in the heavens. Often, however, where the animal was dangerous, e.g. snake, crocodile or hippopotamus, the main item in the feeling would be fear—a fear which could stimulate one of two possible reactions :

(a) Appeasement or a *captatio benevolentiae* to win the animal's goodwill or allay its wrath.
(b) Hostility. An attempt would be made to destroy it.

Naturally, the development of society, with its attendant refinement of religious consciousness, would normally lead to the disappearance of such cults as being inadequate expressions of a new and higher concept of deity. This step, however, was never completed in Egypt; for the Egs., from highest to lowest, always retained the capacity of regarding deity as capable of residing in any object whatsoever. Even the highest expressions of Eg. religious thought state this idea in unequivocal terms (Sethe, *Denkmal Memphitischer Theologie*, p. 55, 54; cf. also id., *Amun und die acht Urgötter*, § 218 ff.; Mariette, *Abydos*, II pl. 54-55 ~ Kees, *Lesebuch*, p. 16). Consequently it need occasion no surprise to find animals connected with state cults at all periods, e.g. the Cynoscephalus

Baboons of Hermopolis (Bonnet, *RÄRG* p. 7); the Crocodile of Sobk (n. II, 68); the Cobra of Wadjet (Kees, *Götterglaube*^{2}, p. 53). Nevertheless, it is amongst the lowest classes of society that animal worship endured in its most primitive aspects; for such a form of religious expression obviously had an immediate appeal to the fellahîn not only because of the aloofness of the more respectable state cults but also because the life of the peasantry was lived in close and daily contact with the animal world. Of these cults we catch occasional glimpses through much of Eg. History, until the great upsurge of popular worship in the L.P. brought it conspicuously to the fore. At first sight perhaps this retrograde movement is difficult to understand but the reasons for it were well elucidated by Wiedemann (*Der alte Orient* 14(1) (1912), p. 17 ff.) :

(a) In the first two or three millennia Egypt had, apart from a few setbacks, been triumphantly successful in almost every branch of culture, all under the protection of the great state cults to which her good fortune was attributed. The last millennium B.C. saw the end of all this. Economic disaster, civil war and repeated foreign invasion by Libya, Nubia, Assyria and Persia shattered all confidence in these old gods who had forsaken their people in their hour of need and so they reverted with ever greater insistence to the ancient household deities who had often been their stay in hours of domestic trial.

(b) The great influx of foreigners into Egypt, especially in and after the Saite Period, and the great favour shown to them by rulers such as Psammetichus I excited a reactionary nationalism which strove to distinguish the Eg. from the foreign at all costs. Most Eg. anthropomorphic deities could be assimilated to corresponding foreign gods but animal worship was something repugnant to Syrian, Gk. and Jew alike. By emphasizing this peculiarly Eg. practice the Egs. were making a desperate effort to affirm and maintain their own cultural identity.

The importance of animal cults in the L.P. is reflected in the Gk. attitude to them; for they clearly regarded them as the distinctive feature of Eg. religion. In fact, ancient writers, both pagan and ecclesiastical, advert frequently to them and, apart from physical remains, it is they who are the most fruitful source of information on the subject (Zimmermann, *Die äg. Religion*, p. 89). The interest of many, especially H., D.S., Plu., and Porph., must have been inspired by the element of contradiction which they saw in such cults, in that Gk. and other ancient peoples had the highest regard for Eg. intellect and civilization, an attitude indeed which can be traced back to Hom. (Introduction, p. 122), and they were consequently presented with the perplexing problem of reconciling this attitude with what was in fact a very primitive phenomenon. H.'s cryptic *τῶν δὲ εἵνεκεν ἀνεῖται [τὰ] ἱρὰ εἰ λέγοιμι, καταβαίην ἂν τῷ λόγῳ ἐς τὰ θεῖα πρήγματα* at the least suggests that all is not what it seems and that there were mysteries involved beyond the common ken. Even Str., who is almost unique amongst ancient writers in having a sane estimate of Eg. culture (XVII, 1, 28 (C806)), surprisingly passes the subject over without further comment. Other ancient authors, however, (Cic., *ND* I, 36; Plin., *HN* II, 21; Juv., XV), are less inclined to give the Egs. the credit for interpreting the cult in metaphorical terms and treat it with scathing contempt. With this classical background behind them even Jews and Christians were unable to take a united stand against animal worship. While Ph. (*De Decalogo* 80), Aristides (*Apologia* 12) and Epiphanius (*Ancor* 103) condemn it as the lowest form of heathenism, Cels. can regard it as instinct with profound metaphorical significance (ap Origenes, *Cels* III, 18 ff.).

Three distinct categories of sacred animal are known (Wiedemann, op. cit., p. 22 ff.).

(a) The Temple Animal, which was regarded as the incarnation of the deity in question and performed a function analogous to the cult statue, i.e. it was an object in which the deity might manifest himself. The three most famous examples were the Apis and Mnevis Bulls and the Ram of Mendes. The animal probably lived near the Holy of Holies (Clem. Al., *Paed* II, 4, 2 ff.). D.S. (I, 84) states that they lived in *ἱεροῖς περιβόλοις* (cf. Spiegelberg, *ZÄS* 43 (1906), p. 132; 56 (1920), p. 19) and Str. (XVII, 1, 31 (C807)) gives us a good idea of how the Apis Bull lived (cf. also XVII, 1, 27 (C805)). Animals that might escape were kept in a sort of cage (*ναός*) of wood or stone. The Temple Animals were distinguished from members of the same species by special markings (cf. n. II, 38) which were related to the myth of the god with whom the animal was connected and consigned to the sacred writings in the keeping of special priests called *ἱερογραμματεῖς*.

(b) Members of the same species as the Temple Animal were also considered sacred, particularly in cases where the latter was accorded nation-wide veneration. Some would be kept in the cult centre to act as a family or court while the rest would receive such benefits as protection against wilful slaughter, often no doubt enforced by severe penalties, and also maintenance, if this were necessary through such contingencies as flooding. Wiedemann characterized the relationship between the two classes as a *μοναρχία*, in the sense that the second class was under the protection of the first. That H. knew the difference is clear from the discussion of Mendes (II, 46) while Str. was quite explicit on the matter (XVII, 1, 22 (C803); 1, 31 (C807)). One example of a whole herd of sacred animals was the Sentet Cows of Ḥatḥor at Cusae (Bonnet, op. cit., p. 403). There were three major characteristics distinguishing this class from (a). In the first place there was only one Temple Animal at any one time. Furthermore, Temple Animals received a cult as a god whereas class (b) did not. Finally, the mortuary service of the Temple Animals was much more elaborate in that they were buried on their own in single tombs or, at least, single vaults (e.g. Serapeum, *PM* III, p. 205 ff.), while their less fortunate fellows were buried "en masse" in grottoes, caves or old tombs (cf. the Saqqara animal necropolis, Emery, *JEA* 51 (1965)ff.). In addition the standard of mummification for the first class was considerably higher.

(c) The third class of sacred animal was characterized by Wiedemann as *Fetischtiere* (Fetish-animals). These were individual examples of class (b) e.g. certain snakes, cats or *canidae* which were kept as domestic animals but accorded religious veneration either as gods in their own right or in virtue of belonging to a sacred species. These too could be kept in cages (*ναοί*) examples of which have been found in graves (Wiedemann, *Le Muséon* 8 (1889), p. 216, n. 1). Cases in point are the house-snakes serving as household gods which are mentioned by a number of classical authors (Hopfner, *Tierkult*, p. 140 ff.).

H. frequently mentions in this section that the animals *ἀποθανόντες ἐταριχεύθησαν*. This statement is confirmed by the vast number of mummies of mammals, fish, reptiles and even insects which have come to light in Egypt (Lortet-Gaillard, *La Faune Momifiée*, passim). The method employed corresponds to H.'s second method (II, 87) as the description of D.S. (I, 83) shows. The total expense of burying a distinguished Temple Animal would have amounted to a considerable sum (D.S., I, 84, 7-8) which was largely if not completely offset by public subscription (cf. Plu., *DIO* 21 (*Mor* 359); further Hopfner, op. cit., p. 20). They had special embalmers who are often named in Gk. papyri, e.g. *PTeb* I, 72, 411 gives *κριοτάφος* and *PGrenf* II, 15, Col. 2, 7 *ἰβιοτάφος*; in fact whole corporations are known, e.g. the Theasitae at Ombos. In the cemetery itself the mortuary cult was conducted by the *χοαχύται* whose name suggests that their chief duty was that of pouring libations for the souls of the departed (Hopfner, op. cit., p. 20 ff.).

Bibliography (General) : Wiedemann, *Der Tierkult der alten Ägypter. Der alte Orient*, 14 (1) (1912); Zimmermann, *Die ägyptische Religion*, p. 87 ff.; Hopfner, *Tierkult*, passim; Erman, *Die Religion*, Index, Tiere, heilige; Roeder, *Volksglaube im Pharaonenreich*, p. 136 ff.; Vandier, *La Religion Égyptienne*^{2}, p. 221 ff.; Bonnet, *RÄRG* p. 812 ff.; Kees, *Götterglaube*^{2}, p. 4 ff.; Morenz, *Ägyptische Religion*, Index, Tier; Roeder, *Die ägyptische Götterwelt*, Index, Tiere verehrt; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 383.

65. καὶ τὰ μὲν σύντροφα ... τὰ δ'οὔ : Substantially correct. H. himself mentions 16 species, Str. 10, D.S. 11, Plu. 17 and Ael. 20. All in all, writers of antiquity knew about 34 (cf. Hopfner, *Tierkult*, p. 10 ff.) and in addition to these, monuments and mummies give the rat, bat, hedgehog, lynx, heron, tortoise, certain types of lizard, the grasshopper and a few species of fly (Passalacqua, *Catalogue*, p. 21). In a word, the vast majority, if not all, of Eg. fauna was accorded divine honours. There was, however, no uniformity in the matter. As H. continually points out, what was sacred in one area was anathema elsewhere—a fact which was to astonish many subsequent observers also (vide Str., XVII, 1, 40 (C812); Juv., XV; J., *Ap* I, 25). This observation is in complete agreement with the Eg. nome lists which give each nome a *κύριος* or chief god and a sacred animal in whom he is incarnate. Naturally such a state of affairs could on occasion give rise to violent disagreements and we are told of a number of cases where two cities came to blows as a result of religious differences (Plu., *DIO* 72 (*Mor* 380); Juv., op. cit.; D.C., XLII, 34; J., *Ap* I, 6; *AJ* I, 8, 2; Ael., *NA* X, 24, cf. XI, 27). Nevertheless, while others received a purely local worship, there were some animals, connected with deities worshipped throughout the country, which were generally accorded a cult e.g. the Cow of Ḥatḥor, the Jackal of Anubis and the Ibis and Hawk of the highly popular Thoth and Ḥorus.

τῶν δὲ εἵνεκεν ἀνεῖται [τὰ] ἱρὰ εἰ λέγοιμι : Other ancient writers are not so reticent and some of the reasons they give are quite acute. Ph. (ap Eus., *PE* VII, 13) and Alexander of Lycopolis (*In Manichaei Opiniones Disputatio* 14) are not wide of the mark when they attribute the cult to fear but D.S. quotes a series of reasons from various sources of which many have been taken up by modern scholars : it was introduced at Isis' command in honour of Osiris (I, 21); the gods had turned into animals to escape the pursuit of men and then, by way of thanks, had made them divine (I, 86; cf. Plu., *DIO* 72 (*Mor* 379)); animals were the standards of various sections of the population and later divinized (I, 90; cf. Loret, *RE* 10 (1902), p. 101 ff.; 11 (1904), p. 69 ff.; Schäfer, *Klio* 6 (1906), p. 393 ff.), a primitive form of the totem theory (cf. Vandier, *La Religion Égyptienne*², p. 24); it was introduced by a king to sow the seeds of disunion amongst his people and prevent rebellion (I, 89; Plu., op. cit., 72 (*Mor* 380)); the worship of animals was due to their usefulness—which in some cases probably was the reason—I, 87. Lucianus (*Astr* 7) explains it in relation to astrology.

νόμος δέ ἐστι ... ἀποδέδεκται : In addition to the *εὐχαί*, which are confirmed by a well informed passage of D.S. (I, 83, 2-3), each sacred animal enjoyed the proceeds of special lands set aside for its maintenance (cf. *PTeb* I, 62, 19 & 23) and Ptol. and Roman documents tell us that the king also contributed to their support in a number of ways (e.g. *Urk* II, 42 ff.).

μελεδωνοὶ ... τῆς τροφῆς : Str. (XVII, 1, 38 (C812)) called them *ἱερεῖς*, probably of a rather subordinate rank, and Gk. papyri show that in later times the priests were called after the animal for which they are concerned (*κροκοδιλοβοσκός* *BGU* III, 734, 2, 7, 33; *ἰβιοβοσκός* (*PTeb* I, 72, 410). Priestesses are also mentioned (e.g. the *ἱέρεια Σουχοῦ* (*PLond* II, 299, p. 150, 13)). As D.S. shows (I, 83 ff.), these people were held in the highest honour. *Παστόφοροι* are also known for sacred animals (Spiegelberg, *AFP* 1 (1900-1), p. 340). Their duty will have been to carry the sacred animals or lead them about since their office in more orthodox cults consisted in carrying the cult image. Eg. evidence is not particularly forthcoming but we have the following list of priests for the sacred cow of Atfih—the *mḥỉ*-priest, the *smn ḥ3t* priest, the Prophets, the God's Fathers, the Hourly Priests and the Hierogrammats (Spiegelberg, *ZÄS* 43 (1906), p. 129 ff.).

τὸ δ'ἄν τις ... τεθνάναι ἀνάγκη : This statement, supported by D.S., I, 83, 6-9 (cf. Ael., *NA* XI, 27), is impossible to substantiate from Eg. sources but the classical evidence on the question is probably reliable. The corollary is certainly true, viz. that a person who was killed by a snake or a crocodile (H., II, 90; J., *Ap* II, 7) was regarded with great reverence (cf. Spiegelberg, *SBAW* 1925, 2 Abh., I).

66. αἰελούρους : Older form of *αἴλουρος*, cf. Byz. *σαίνουρος*. The word was retained until the 7th Century A.D. but gradually gave way to *γάττος*, *cattus*, a word believed to be of N. African origin (Keller, *Die antike Tierwelt*, I, p. 64 ff.). Like *feles*, *αἴλουρος* originally meant a wild cat (so Ar., *Ach* 879) which differs anatomically and physiologically from the domestic version. Here, however, the Libyan cat, *Felis maniculata*, the ancestor of our domestic cat, is meant (cf. Anderson, *Zoology. Mammalia*, p. 171 ff.). This animal is generally of one colour, pale yellow, rather like desert sand. Since in some Eg. monuments the ears are rather long, cross breeding with the considerably larger *Felis chaus* or marsh lynx is likely (Anderson, op. cit., p. 176 ff.). In fact Keller's fig. 22 indicates that in the N.K. the two species were crossed to produce a species for hunting birds or at least to act as a retriever. How common they were is shown by the cycle of the Setem Khaemwese (Griffith, *Stories of the High Priests*, p. 36). It should be observed that *Felis maniculata* was almost as strange to H. as the hippopotamus or crocodile; for the domestic cat has not been identified in Europe until the 1st Century A.D. and did not become common until as late as the 12th when it came into vogue almost certainly as a result of the spread of rats from S. Russia and Asia. In the Gk. and Roman World the animals used to rid houses of vermin were snakes or weasels (Keller, op. cit., p. 73 ff.).

ἐπεὰν τέκωσι ... γὰρ τὸ θηρίον : There is a tradition of the lust of male cats (Ael., *NA* VI, 27) but Arist. (*HA* V, 2) claims that it is the females who are so afflicted. The fact lurking behind this passage may be that with cats *μίξις* is often accompanied by a great deal of squealing. An additional factor might be that cats carry young in their mouths, a practice possibly suggesting violence.

πυρκαϊῆς δὲ γινομένης ... ἐς τὸ πῦρ : Pure paradoxography (Introduction, p. 145 ff.). There is not a shred of evidence that cats behave, or ever have behaved, in this extraordinary fashion. The passage is of a piece with the picturesque vagaries characteristic of the zoology of Ael. and much of Plin.

ταῦτα δὲ γινόμενα ... τὴν κεφαλήν : Because the cat was sacred. The earliest evidence of a cult dates from the N.K. and seems to refer to Temple Animals. In the L.P. it became ever more popular and is strikingly illustrated by the great number of cat statuettes from that period, normally bronze but also of wood, enamel or stone (Langton-Langton, *The Cat in Ancient Egypt*, passim). The animal's deification appears to rest on three things :

(a) Its nocturnal mode of existence.
(b) Its striking facility in bearing young.
(c) Its rôle in destroying vermin and snakes.

(a) and (b) facilitated the cat's association with a series of fertility and erotic goddesses, pre-eminently Bastet of Bubastis, much the most famous and important of all cat cults (*Ἑλληνιστί* Artemis, Eileithuia; cf. Ov., *Met* V, 330; Ael., *NA* XII, 29; Ant. Lib., 28). (c), on the other hand, brought it within the compass of solar cults since Rēʿ's greatest foe was the primeval serpent Apophis. Hence the sun god can be represented as a cat (Budge, *Papyrus of Hunefer*, pl. 11) or a cat-headed man (Bonnet, *RÄRG* p. 372 ff.). The animal also has mortuary associations which might derive from any of the factors listed e.g. the Cat of Lapis Lazuli (Blackman, *JEA* 5 (1918), p. 34, pl. 6) which is presumably the animal sometimes represented beside Osiris (Langton, *JEA* 24 (1938), pl. 3, 6). In general vide Hopfner, *Tierkult*, p. 35 ff.; Bonnet, *RÄRG* p. 371 ff.; Kees, *Götterglaube*^{2}, p. 35 ff.; Abou-Ghazi, *Das Altertum* 9 (1963), p. 7 ff.

ἐν ὁτέοισι δ'ἂν ... κεφαλήν : No Eg. corroboration. Possibly it was connected with a local cult legend in some area which H. had visited. For the general Eg. practice in mourning vide II, 85. The accuracy of that description is beyond doubt and there can be no reason for doubting this (cf. D.S., I, 84, 2-3).

67. ἀπάγονται ... ταριχευθέντες : On mummified cats vide Lortet-Gaillard, *La Faune Momifiée*, I, p. 19 ff.; Morrison-Scott, *London Zool. Soc. Proc.* 121 (1951-2), p. 861 ff. The vast majority of examples are *Felis maniculata*, though examples of *Felis chaus* seem known (Lortet-Gaillard, op. cit., p. 21 ff.). The heads were usually carefully moulded and the eyes often depicted on the wrapping. They were enveloped in a number of large bands of linen which had become completely yellow from the resin and natron in which they had been dipped. Over these were bound bandages of various colours, sometimes in horizontal bands, sometimes transversely. According to Lortet-Gaillard there were not only traces of blows (e.g. broken noses) but the majority had been either strangled or drowned "peut-être à des moments où leur nombre devenait un danger pour les habitants". This is very curious because D.S. (I, 83, 6-9), Cic., (*Tusc* V, 27), Min. Fel. (*Oct* 28) and Tert. (*Apol* 24, 4) all state that those who killed a cat, even if by accident, were executed. Perhaps, however, this rule held good only in certain periods and in certain areas where the animal was held in high honour.

ἐν Βουβάστι πόλι : From the XXIInd Dyn. a vast cat cemetery grew up on this site (Naville, *Bubastis*, p. 52 ff.) where the remains of the animals were once so numerous that considerable quantities were shipped to Europe to make manure and were also employed for this purpose by the natives (Anderson, *Zoology, Mammalia*, p. 175 ff.). They were interred in great pits the walls and bottoms of which were faced with brick or hardened clay (H.'s *ἱραὶ στέγαι*). One of these had a capacity of no less than 720 cubic feet. A few skulls discovered on the site were those of ichneumons, another cult-animal of Bastet (vide infra, p. 302). This cemetery was not, as H. implies, unique. Further examples are known at Tanis (Petrie, *Tanis*, II, p. 33), Speos Artemidos, whose lion-headed goddess Pachet was regarded as a form of Bastet (Bonnet, *RÄRG* p. 578), Beni Hasan where the necropolis, dating from the Persian and Ptol.

Period, was almost a kilometre long (Wilkinson, *Manners and Customs*, V, pp. 117, 163, 167), Gebel Abu Feda, Darb el Kareib, Thebes, Abydos (Hopfner, *Tierkult*, p. 130), the Serapeum at Alexandria (Keller, *Die antike Tierwelt*, I, p. 69) where remains have been found both mummified and simply buried, and Saqqara in the neighbourhood of the Temple of Bastet (Bonnet, op. cit., p. 81). The probable explanation of H.'s error is that the Bubastite necropolis was almost certainly the main cat cemetery of the Delta, the area which the Gks. knew best, and there would have been a general tendency throughout that part of Egypt for cats to be taken thither for burial.

τὰς δὲ κύνας ... ἱρῇσι θήκῃσι : Other classical writers mention the cult of the dog (e.g. Str. (XVII, 1, 40 (C812)) & Ael. (*NA* X, 45) who state that it was worshipped throughout Egypt; Plu. (*Disput Conv* VII, 3 (*Mor* 703)) who mentions its veneration as confined to specific areas). In fact we know of at least four cities called Cynopolis, the chief of which lay in the 17th Nome of U.E. whose main deities were Anubis and Bata (Bonnet, op. cit., p. 412). It is particularly as the sacred animal of the former that the dog is mentioned in many ancient writers (Str., l.c.; D.S., I, 87; Ael., l.c.; Plu., *DIO* 14 (*Mor* 356); Ov., *Met* IX, 689; Prop., III, 11, 42). It seems, however, that the ancients were using the word *κύων* in a very general sense to cover wild dogs, foxes and jackals; for the vast majority of the mummies found in connection with the cult of Anubis are those of jackals (Hopfner, op. cit., p. 52), though a few mummies of dogs, domestic and wild, were included amongst them. This clearly shows the difficulty the Egs. experienced in distinguishing the various canine species (Kees, *Götterglaube*², p. 27; Bonnet, op. cit., p. 41), a difficulty further reflected by the vague word *s3b* which can be applied to various species (*Wb* III, p. 420, 5-13). According to Keimer (*BiOr* 5 (1948), p. 22) there were three wild canines of importance in Egypt—the Eg. jackal or wolf (*Canis lupaster*), the true prototype of Anubis, the Eg. fox (*Canis vulpes aegyptiacus*) and the desert fox (*Canis zerda*), which inhabits the oases. All are found on Eg. monuments (though it is often difficult to distinguish the first two) and they all have the qualities which inspired divinization :

(a) All haunt the desert margins where the dead were at rest, often, in the earlier periods, uncovering their bones. This would have two results :

(1) They could be regarded as the watchful guardians of the dead.
(2) They could be feared for the mutilation which they could inflict on the corpse and so win divine honours on the principle of *captatio benevolentiae*.

(b) They are all very swift and excellent trackers, a quality suggesting more than human knowledge. For this reason, perhaps, the word *s3b* is frequently used to characterize officials, or to describe the swift action of the divine king (*Wb* l.c., 7 & 13).

H.'s statement on the distribution of burial places agrees well with Eg. evidence since canine mummies have been found in most parts of Egypt (eg. Saqqara, Siut (Lycopolis), El Hareib, Sheikh Fadl (Cynopolis). Sharūna and Thebes) (Hopfner, op. cit., pp. 52, 54; Bonnet, op. cit., pp. 450, 871).

As in the case of cats (vide supra) many of the bodies were those of robust adults and consequently were probably strangled, drowned or poisoned (Lortet-Gaillard, op. cit., I, p. 2).

ὡς δὲ αὔτως ... θάπτονται : *ἰχνευτής* is an older form of *ἰχνεύμων* (Hsch., s.v.). Eg. *ʿḏ* Brunner-Traut, *NAWG* 1965, p. 157 ff.; *ḫ3trw* = Copt. ϣⲁⲑⲟⲩⲗ (*Wb* III, p. 236, 10) after which is named a demon of the underworld with the head of a rat or ichneumon (cf. *LD* III, pl. 224h); *ʿmʿm* (De Wit, *ZÄS* 88 (1963), p. 74; Brunner-Traut, op. cit., p. 145 ff.). It is in fact the Nile Mongoose, *Herpestes ichneumon* (Anderson, *Zoology. Mammalia*, p. 190), one of a number of marsh predators which achieved prominence in Eg. religion and came to the fore in the L.P. (Kees, op. cit., p. 32 ff.). In Anderson's time they were caught and tamed to protect houses against rats and snakes (op. cit., p. 192). Doubtless the animal's divinization arose from its skill in killing the latter which, as with the cat, brought it quickly into solar mythology (a) as the destroyer of Apophis (n. II, 66) (b) as champion of Rēʿ. In the former capacity it figures in the cults of Ḥorus of Letopolis (*Ḥr ḫnt(y) ỉrty*) and Rēʿ-Atum; in the latter, it was closely affiliated to Wadjet of Buto who, as the Solar Eye, frequently appears as the guardian of Rēʿ. See further Hopfner, op. cit., p. 55; Roeder, *Egyptian Religion* 4 (1936), p. 23 ff.; Bonnet, op.

cit., p. 321; Brunner-Traut, op. cit., p. 123 ff.; Borghouts, *The Magical Texts of Papyrus Leiden I 348*, p. 118 ff.

This evidence would suggest, therefore, that the main cult centres were Letopolis, Buto and Heliopolis but none of these sites has, as yet, produced mummies, though examples were found in great numbers at Tanis (Edwards, *Academy* 26, July 1884, p. 67). As for other sites, Sais has yielded the occasional bronze figure as also has Athribis to which Str. (XVII, 1, 40 (C813)) attributes the cult of the shrew-mouse, an animal often confused with the ichneumon. Bubastis not only provided ichneumon skulls in the cat cemetery (Naville, *Bubastis*, p. 53) but also a fragment of temple naos depicting an ichneumon (Naville, op. cit., 58, pl. XLVF). Str. (XVII, 1, 39 (C812)) clearly regarded Herakleopolis as the most important centre of its worship but there is no other evidence unless we include a representation of the animal from the Labyrinth (Bonnet, op. cit., p. 321). Finally coins suggest a cult for Achmîm (Panopolis) (Rougé, *Monnaies des Nomes*, p. 17). On the question of mummy distribution we have insufficient data either to confirm or refute H.'s statement.

τὰς δὲ μυγαλᾶς : *μυγαλῆ* = "shrew-mouse, field-mouse" (*LSJ* p. 1150, a, s.v. *μυγαλῆ*). Evidence of a cult is not plentiful but sufficient to prove its existence (Brunner-Traut, op. cit., p. 133 ff.). The animal was associated with Ḥorus *Mḫnty-(n)-'Irty* of Letopolis and there is incontrovertible evidence that H. is correct in associating it also with Buto (op. cit., p. 161). Mummies are not, however, forthcoming.

καὶ τοὺς ἴρηκας ... πόλιν : *ἵρηξ*, according to Thompson (*Glossary of Greek Birds*^{2}, p. 114), was a generic term for the smaller hawks and falcons. The exact species of the sacred hawk itself has been a subject of considerable controversy. Lortet-Gaillard (op. cit., I, p. 116) argue that representations suggest either *Falco babylonica* or *Falco feldeggi* or, possibly, a young *Hierofalco saker*. Loret's suggestion of *Falco peregrinus* (*BIFAO* 3 (1903), p. 1) is not, however, satisfactory since the species has not yet been found in mummified form. In fact the number of different species found together in hawk cemeteries is quite considerable, ranging from sparrow hawks and falcons to buzzards and eagles (Lortet-Gaillard, *ASAE* 3 (1902), p. 18 ff.). This circumstance may be due to a number of factors. Different species might have been honoured in different areas or the decay of animal worship may have led to the blurring of distinctions in such matters. Most probably, however, as with the dog (vide supra, p. 301), the Egs. themselves were not particularly clear on the subject. Be that as it may, the reasons for the worship of the hawk can be deduced with some degree of confidence—(a) its high flight which seemed to unite it with the sun (Ael., *NA* X, 14) (b) its aggressive nature.

According to Str. (XVII, 1, 40 (C812)), D.S. (I, 83, 87) and Plu. (*DIO* 73 (*Mor* 380)) it was worshipped throughout Egypt and beyond any doubt their statements are correct. It was associated pre-eminently with Ḥorus (*Ḥrw*, "the Far" or "Lofty One") as the dynastic god of the old kings of Hierakonpolis (Str., XVII, 1, 47 (C817)) and, through association with Ḥorus of Beḥdet, the great god of Edfu, it became, with the vulture of Nekhbet and the cobra of Wadjet, one of the chief protectors of the Eg. kings (Kees, op. cit., pl. Vc). This intimate connection with the royal house gave the cult of the Ḥorus Hawk such prestige that it was able to assimilate the very considerable number of falcon cults existing throughout Egypt, a process betrayed by the large variety of epithets applied to him. Good examples are those of Montju, Sokar, Sopdu and, in particular, the cult of the Solar Falcon in the region of Heliopolis where he became Ḥarakhti (Ḥorus of the Horizon). Even Osiris, through assimilation with the falcon deity Sokar, acquired a hawk's head (Mariette, *Dendérah*, IV, pl. 66). The ancient association of Ḥorus with Buto (vide Bonnet, op. cit., p. 307), where he supplanted an ancient heron god, was known to H. (II, 155) and explains his connecting mummified hawks with that city. H. is, however, quite mistaken in confining the burial of *ἴρηκες* to Buto. They are found in large numbers throughout the country (Hopfner, op. cit., p. 112 ff.; Emery, *JEA* 57 (1971), p. 4 ff.).

τὰς δὲ ἴβις : Vide nn. II, 75 ff. As with other similar statements in this chapter the most we can accept is a general tendency. Since the ibis was the cult animal of Thoth (Hermes), it would be natural to transport ibis mummies to the main centre of his worship at Hermopolis Magna (mod. Eshmunen, capital of the 15th Nome of U.E.) and examples have actually been found there (Gaillard-Daressy, *La Faune Momifiée*, p. 60). They have, however, also come to light elsewhere throughout Egypt—Hermopolis (Eg. *Bʿḥ* in the 15th Nome of L.E.) (Bonnet, op. cit., p. 295), Saqqara, Ombos, Thebes, Hagg Kandil and Abydos (Bonnet, op. cit., p. 320 ff.; Emery, *JEA* 51 (1965), p. 3 ff.; 52 (1966), p. 3 ff.; 57 (1971), p. 3 ff.).

τὰς δὲ ἄρκτους ... : Keimer (*BIE* 36 (1955), p. 455 ff.) points out that not only has the bear never been native to Egypt but that it does not appear to have occurred at all in N. Africa in historic times, with the possible exception of the Mt. Atlas region (cf. H., IV, 191, 4). Nevertheless, there are about seven representations of them in Eg. art (id., *AOF* 17 (1954-56), p. 337 ff.) all of which are captive specimens of the now extinct *Ursus syriacus* brought as booty or tribute to Egypt. He points out that one or two examples might have wandered into the Suez area or the E. Delta and died there, thus giving rise to H.'s rather odd statement. This may be so but in any case the connection of bears with Egypt is established and even the captive specimens would have to be buried somewhere.

τοὺς λύκους οὐ πολλῷ τε : Almost certainly *Canis lupaster* (vide supra, p. 301 ff.).

68. τῶν δὲ κροκοδείλων φύσις ἐστὶ τοιήδε ... οὐδὲν σίνεται τὸν τροχίλον : This passage is *not* derived from Hec. (*FgrH* I, T.22, F.324; Introduction, p. 138). For other classical accounts of the crocodile vide Plin., *HN* VIII, 89 ff.; D.S., I, 35; Ael, *NA* III, 11; VIII, 25; XVII, 6 etc.; Arist., *HA* II, 10. The latter part of Arist.'s description is taken practically verbatim from H. and later accounts (e.g. Plin.) are simply developments with the addition of ever more fictional elements. The zoology of the Nile crocodile (*Crocodilus niloticus*), in contrast to that of the hippopotamus (II, 71), is very good but not perfect.

τοὺς χειμεριωτάτους : Cf. Ael., *NA* X, 21. The crocodile does not hibernate though alligators apparently do. It is, however, possible that they aestivate during the hot season if their pools dry up (Hopfner, *Tierkult*, p. 126; Bellairs, *Reptiles*, p. 104).

χερσαῖον καὶ λιμναῖόν ἐστι : So Ael., *NA* XI, 37 who speaks of it as one of the *ἀμφίβια*.

τίκτει ... καὶ ἐκλέπει : The number of eggs varies from about 25-95 for *C. niloticus* (Cott, *TZSL* 29 (1961), p. 274 ff.; Bellairs, op. cit., p. 102) and they are in fact about the size of those of a goose. They are laid during the spring in the sand where a repository is prepared for them and then covered over. However, the crocodile does not hatch them out (*ἐκλέπει*) in the sense that a bird does, though it does stay on or over the site and helps to release the young from their subterranean nest once hatched. This takes place during the winter.

τὸ πολλὸν τῆς ἡμέρης ... τῆς δρόσου : The crocodile spends a large part of the day basking in the sun, generally on sand islands in the middle of the river. Its nights are occupied in hunting in the water. The animal generally prefers open reaches of river with a sluggish current and numerous sandbanks.

πάντων δὲ ... μέζων ἔτι : The length of a newly born crocodile varies from about 6-8″ while the maximum size known to Anderson (*Zoology. Reptilia*, p. 11 ff.) was 17 ft. According to Bellairs-Carrington (*The World of Reptiles*, p. 131) the maximum length is, in fact, about 20 ft. for the Nile species. H.'s 17 cubits is, therefore, much too large. In fact the variation on this subject in both ancient and modern writers is considerable (Anderson, l.c.), and Ael. (op. cit., XVII, 6) typically mentions one measuring 26 cubits 4 spans. The measurements are presumably proportionate to the degree of fear inspired in the people who saw these terrible reptiles.

γλῶσσαν δὲ ... οὐκ ἔφυσε : The tongue of the crocodile is short, almost immobile and consequently difficult to detect (Anderson, op. cit., p. 19). It is in fact attached to the lower jaw almost as far as the tip (Gossen-Steier, *RE* XI, 1948).

οὐδὲ κινέει ... τῇ κάτω : Cf. Arist., *HA* I, 11. Accurate observation since the stance of the crocodile demands this but anatomically the crocodile is perfectly capable of moving its lower jaw (Bellairs, op. cit., p. 98).

τυφλὸν δὲ ... ὀξυδερκέστατον : Arist. (*HA* II, 10) claims that it sees with difficulty in the water. That it is in fact blind is not certain but unlikely. There is, however, no doubt that it is very sharp-sighted on land (Bellairs, op. cit., p. 101).

ἅτε δὴ ὦν ... οὐδὲν σίνεται τὸν τροχίλον : Since the *βδέλλα* ("leech" *LSJ* p. 312,a, s.v. *βδέλλα* 1) does not occur in Egypt, it is possible that we have here an example of *interpretatio graeca*. Anderson (op. cit., p. 19) states that the crocodile is the host of parasitic worms and when it lies with its mouth open these worms rise up into it and attract certain types of birds. The Arab writers especially mention this fact (cf. also Ael., op. cit., III, 11; VIII, 25, where he states that they warn the crocodile of danger). The species of the *τροχίλος* is a problem. Thompson (*Glossary of Gk. Birds*^{2}, p. 288) believed that it was *Pluvianus aegyptius* which, according to Meinertzhagen (*Nicoll's Birds of Egypt*, p. 528), is one of the many crocodile birds which enter the mouth of the beast and clean it out. Keimer accepts the identification (*ASAE* 30 (1930), p. 4). According to Ael. (op. cit., XII, 15), there are many kinds of *τροχίλος* but only the *κλαδαρόρυγχος* is the friend of the crocodile. Other possible candidates for the honour are *Hoplopterus spinosus* (Spur-winged Plover) and *Aegialites cunonica* (Thompson, l.c.).

Bibliography : Anderson, *Zoology. Reptilia*, p. 1 ff.; Keller, *Die antike Tierwelt*, II, p. 260 ff.; Hopfner, *Tierkult*, p. 125 ff.; Meinertzhagen, *Nicoll's Birds of Egypt*, p. 528; Gossen-Steier, *RE* XI, 1947 ff.; Thompson, *Glossary of Greek Birds*^{2}, p. 288 ff.; Cott, *TZSL* 29 (1961), p. 211 ff.; Bellairs-Carrington, *The World of Reptiles*, p. 130 ff.; Brentjes, *Natur und Mus.* 97(3) (1967), p. 81 ff.; Bellairs, *Reptiles*^{3}, p. 96 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 193.

69. τοῖσι μὲν δὴ ... περιέπουσι : H. is quite right. Attitudes to the crocodile depended entirely on the god to whom it was related in cult—a relation in turn generally depending on the attitude to its dreadful ferocity. The Eg. might wish to enlist its powers for his own use and regard it as a protector and champion or he might consider it the embodiment of the powers of destruction—in which case it would be loathed and execrated :

(a) In areas where the crocodile was connected with Sobk, it was regarded as sacred. Kees (*Götterglaube*^{2}, p. 17) points out that such cults might be expected wherever an island in the stream, shoals or cliffs presented dangers to navigation as also where there were many lakes and canals e.g. the Fayyûm and the Delta. *Captatio benevolentiae* also led to its being regarded in a favourable light in relation to other deities e.g. it penetrated into the Myth of Osiris where we find Ḥorus assuming the form of a crocodile to gather up his father's scattered members (cf. Junker, *Götterdekret*, p. 43) and we also find the goddess Neith assimilating a double crocodile-cult (Wiedemann, *PSBA* 36 (1914), p. 48 ff.).

(b) If it were connected with Seth it *could* be regarded with favour in Seth-worshipping areas e.g. Kom Ombo (de Morgan, *Kom Ombos* I, p. 312, 422) but was generally treated as an enemy. This hostility was often a threat to old cults. Dendera provides an intriguing example of a city famed for its hatred of the crocodile (cf. Str., XVII, 1, 44 (C814); Plin., *HN* XXVIII, 31; Ael., *NA* X, 24) while at the same time having a crocodile on its nome standard, showing that originally it had had a cult (Bonnet, *RÄRG* p. 393). According to classical writers the actual relation to Seth was that he had fled or fought Ḥorus in the form of a crocodile (Plu., *DIO* 50 (*Mor* 371); Ael., *NA* X, 21). Both of these writers mention that they were captured with nets and killed and eaten at Apollinopolis Magna (Edfû—the great cult centre of Ḥorus of Beḥdet) and Apollinopolis Parva near Dendera (cf. Str., XVII, 1, 47 (C817)).

This ambivalent attitude, which occurs again and again *vis-à-vis* dangerous *ἱερὰ ζῷα* in Egypt, naturally led to the type of inter-nome hostility mentioned in Juv. (XV, 33 ff.), an ambivalence which was carried over even into the After-life; for in the *BD* the crocodile may either be the destroyer of the wicked or threatener of the righteous who, therefore, needed protection against it (cf. *BD* Ch. XXXI-II).

οἱ δὲ περί τε Θήβας ... εἶναι ἱρούς : This is true. The main centre of crocodile worship in the Fayyûm was Crocodilonpolis (vide n. II, 148). According to D.S. (I, 89) the city was founded by Menes when he had been saved from his dogs by being carried across the Nile on the back of a crocodile. The town is certainly ancient since its Eg. name, Shedet, occurs on a jar sealing of Narmer (Petrie, *Tarkhan*, I, pl. II, no. 4; cf. *PT* 1564). Its great period was the XIIth Dyn. but even in the time of Ramesses III it had an extremely important provincial temple (*BAR* IV, § 369). In this district the gradual solarization of Eg. religion during the O.K. (Vandier, *La Religion Égyptienne*², Index, s.v. Solarisation) led to Sobk's identification with Rēʿ as Sobk-rēʿ so that we find representations of falcon-headed crocodiles. The importance of the cult in the Theban area is equally clear, Hermonthis being a great centre (cf. L*D* IV, pl. 63d). It is interesting to note that the names of a number of Pharaohs of the 2nd Intermediate Period (e.g. Sobkḥotpe and Sobkemsaf) who came from this area include that of the great crocodile god. Apart from Ombos, which had a special crocodile festival and where Ael. (op. cit., X, 21) says it was considered a great honour to be eaten by one, the animal was worshipped in numerous other regions scattered through U. and L.E. e.g. Crocodilopolis, south of Thebes (Str., l.c.), Diospolis Parva, Antaeopolis and Coptos (Ael., op. cit., 24). For an exhaustive list cf. Kees, *RE* IVA, 1, 543 ff.

ἐκ πάντων ... ζῶντας : For the significance of *ἕνα* vide Introductory n. II, 65-76. It is not possible to corroborate this account in every detail but there can be no doubt that it is substantially correct. Several well preserved mummies from the necropolis at Thebes had holes in the region of the ear where rings must have been placed but, since the crocodile has no external ear, the holes had to be bored into the skull itself (Hopfner, *Tierkult*, p. 128). An illustration of a crocodile with a cake before it will be found in de Morgan, *Kom Ombos*, I, p. 312, 422 while a detailed and rather amusing picture of the *τροφή* of the sacred crocodile occurs in Str. (XVII, 1, 38 (C812)).

ἀποϑανόντας δὲ ... ἐν ἱρῇσι ϑήκῃσι : Crocodile mummies abound. Cemeteries are found in the Fayyûm (vide n. II, 148), Ombos (cemetery at El Khatteb), Gebelein, El Kab, Coptos and the biggest at Maʿabde opposite Manfalût (Hopfner, op. cit., p. 130). For a discussion of these mummies vide Lortet-Gaillard, *La Faune Momifiée* I, p. 181 ff.

οἱ δὲ περὶ Ἐλεφαντίνην ... εἶναι : Specific evidence for this area is not great but, contrary to H.'s statement, a cult of Sobk of Syene is known in the Ptol. Period (de Morgan, *Cat. de Mons.*, I, p. 50).

καλέονται δὲ οὐ ... αἱμασιῇσι : *χάμψαι*—Eg. *msḥ*; Copt. ⲙ̄ⲥⲁϩ

Arab. تِمْساح "*tĭmsāḥ*". H.'s form probably derives from *msḥ* + plural indefinite article as Bohairic ϩⲁⲛ-ⲙ̄ⲥⲁϩ "some crocodiles, crocodiles" (Černý, *ASAE* 42 (1943) p. 346 ff.).

κροκοδείλους : Gossen-Steier (*RE* XI, 1947) claims that the word is derived from *κέρκος* "tail" and *δρῖλος* "worm". Frisk (*Griechisches etymologisches Wörterbuch*, II, p. 23) favours a derivation from *κρόκη* "pebble" and *δρῖλος*. The latter would suit our context rather well but, whatever the etymology, the use of the word *κροκόδειλος* "lizard" to refer to these large and dangerous reptiles is clearly an example of the light-hearted attitude which the Gks. often adopted to things Eg. (cf. *μεγάλοι στρουθοί* "big sparrows, ostriches", *ὀβελίσκοι* "little spits, obelisks", *σύριγγες* "pipes, underground tombs", *πυραμίδες* "wheatcakes, pyramids").

Bibliography : Lortet-Gaillard, *La Faune Momifiée*, I, p. 181 ff.; Roeder ap Roscher, *ML* IV, 779, 1093 ff.; Hopfner, *Tierkult*, p. 125 ff.; Kees, *RE* IVA, 1, 540 ff.; Bonnet, *RÄRG* p. 392 ff.; Kees, *Götterglaube*^{2}, p. 14 ff.; Dolzani, *Il Dio Sobk*; Kákosy, *ZÄS* 90 (1963), p. 66 ff.; id., *MDAI(K)* 20 (1965), p. 116 ff.

70. **ἄγραι δέ σφεων ... παντοῖαι** : Cf. D.S., I, 35, 5. Capart (*Primitive Art*, p. 204, fig. 161) published a picture of prehistoric date depicting a crocodile which had been killed from a boat by means of a harpoon but representations of crocodile hunts from the historic period are extremely rare (cf. Klebs, *MR* p. 95 ff. and our Addenda *infra*), doubtless for religious reasons. However, D.S. (l.c.) confirms that this ancient practice had continued into the L.P. and also mentions the use of nets.

ἣ δ'ὦν ... τοῦτο σὺν πόνῳ : This passage certainly owes something to Hec. (*FgrH* I, F.324; Introduction, p. 138). According to D.S. (I, 35, 5) the method was obsolete in his time. H.'s rather amusing description leaves the impression that it is really the peasants hunting the creature for sport who are concerned. Since there is no suggestion of killing it, the method was perhaps intended for catching crocodiles alive. Wilkinson-Birch (*Manners and Customs*, II, p. 134) describe a similar custom in Ethiopia where, however, a dog rather than a pig was used, and this is corroborated by Hopfner (*Tierkult*, p. 134) who states that the method was still employed on the Upper Nile in his day as well as in America.

71. οἱ δὲ ἵπποι οἱ ποτάμιοι ... οὐκ ἱροί : The cult rôle of the hippo. depended, as usual, on the aspect of the animal which predominated in the worshippers' minds. The aspects may be tabulated as follows :

1. It was extremely dangerous as well as destructive of crops (Caminos, *LEM* p. 247; D.S., I, 35; Plin., *HN* VIII, 95; Ael., *NA* V, 53). These characteristics would excite two reactions (a) Self-protection (b) *Captatio benevolentiae.*

2. The Mother. Its very form must have seemed the embodiment of maternal warmth and comfort as well as creating an impression of pregnancy. Furthermore, the animal is an excellent mother.

(1) (a) The self-protective instinct prevails. It is exemplified in the not infrequent representations of hippo. hunting (Säve-Söderbergh, *On Eg. Representations of Hippo. Hunting*, passim) but above all in the close association with Seth-Typhon (Plu., *DIO* 32 (*Mor* 363), 50 (*Mor* 371)) who was generally regarded as a violent and destructive negative cosmic force. The conflict of Ḥorus and Seth is, therefore, frequently represented in terms of Ḥorus' harpooning a hippo. (Chassinat, *Edfou*, XIII, pl. DVIII, DX, DXII-III etc.) and in the "Contendings of Ḥorus and Seth" both protagonists assume this form (Gardiner, *LES* 8, 9 ff. ~ Lefebvre, *Romans et Contes*, p. 193 ff.). In the cult this attitude finds reflection in the representation of the sacrificial animal both orally and materially as a red hippo. (Alliot, *Le Culte*, II, pp. 524, 699, 779, 784 ff.). The connection is also clear in more light hearted vein in the "Quarrel of Apophis and Seqenenrē'" (Gardiner, op. cit., p. 85 ~ Lefebvre, op. cit., p. 131 ff.).

(b) The hippo. was certainly held in honour, presumably on the principle of *captatio benevolentiae*, in some areas where he was identified with Seth e.g. Antaeopolis where it was forbidden to kill the animal (Gardiner, *AEO* II, p. 53* ff.; Montet, *DG* II, p. 120).

(2) The maternal qualities of the animal gave rise at an early period to a hippo. *Schutzgöttin* who embodied the principles of birth, maternal kindness, nourishment and rebirth in the After-life. She is clearly an amalgam of several hippo. deities such as Ipet and Taurt (Bonnet, *RÄRG* p. 530 ff.) and had important cult centres in Western Thebes (Bruyère, *ASAE* 25 (1925), p. 91), the Fayyûm, where she was clearly related to Sobk (Daressy, *ASAE* 11 (1911), p. 190; Hunt, *POxy* IX, no.

1188, 3, 20), Silsileh (L*D* III, pl. 175c), and the First Cataract area (de Morgan, *Cat. des Mons.*, I, p. 204, 34).

How far aspect 2 would affect the attitude of worshippers to the animal itself is a very open question but there is no doubt that of these attitudes 1(a) was much the most important and hippo. cults were, in consequence, very restricted in scope (Kees, *Götterglaube*^{2}, p. 13). H.'s *general* impression is, therefore, correct.

Bibliography : Hopfner, *Tierkult*, p. 63 ff.; Roeder ap Roscher, *ML* IV, 779 ff.; id., ib. V, 878 ff.; Kees, *RE* IIA, 2, 1900 ff.; Säve-Söderbergh, *On Ancient Eg. Representations of Hippo. Hunting as a Religious Motive*, passim; Bonnet, *RÄRG* p. 528 ff.; Kees, *Studi Rosellini*, II, p. 143 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 251.

νομῷ μὲν τῷ Παπρημίτῃ : Vide n. II, 59, 3.

φύσιν δὲ παρέχονται : This description of *Hippopotamus amphibius*, which certainly owes something to Hec. (*FgrH* I, F.324; Introduction, p. 138 ff.), is by far the most inaccurate piece of zoology in Bk. II and offers a salutary warning to those who wish to attribute the inaccuracies in H.'s account of Egypt to the latter's stupidity and its felicities to his illustrious predecessor. Amazingly no classical writer is good (though D.S. (I, 35) improves on H. and is certainly the best we ever get), despite the fact that the animal was still to be seen, even in the Delta, in H.'s time and for centuries afterwards (Anderson, *Zoology. Mammalia*, p. 356 ff.) and excellent representations were also available (Keimer, *REA* 2 (1929), p. 214 ff.).

τετράπουν ἐστί ... δίχηλον, ὁπλαὶ βοός : The legs are short and broad with four subequal toes (Anderson, op. cit., p. 356). It is not, therefore, cloven-footed and does not have the hooves of an ox.

σιμόν : The hippo. has a very broad and rounded muzzle and short ears. It might just possibly look ape-faced to some.

λοφιὴν ἔχον ἵππου : The hippo.'s skin is practically hairless and sports nothing resembling a mane (Anderson, l.c.).

χαυλιόδοντας φαῖνον : The hippo. has formidable teeth which were much prized by the ancients as a material for "objets d'art" (Paus., VIII, 46, 4).

οὐρὴν ἵππου : The hippo. has a minute tail quite unlike that of a horse (Anderson, l.c.).

καὶ φωνήν : The hippo.'s *φωνή* bears no resemblance to that of a horse. It is characterized by Anderson (op. cit., p. 357) as similar to the lowing of a buffalo or even the creaking of a large door as it is being opened.

μέγαθος ὅσον τε βοῦς ὁ μέγιστος : Not good but at least better than Arist.'s *μέγεθος δ'ἐστὶν ἡλίκον ὄνος* (*HA* II, 7). The animal can attain a length of 13 ft., a height of 5 ft. and a weight of 2-3 tons.

τὸ δέρμα δ'αὐτοῦ ... ἐξ αὐτοῦ : Possible though only for throwing spears. It was certainly used for shields and helmets (Plin., *HN* VIII, 95; cf. Ptol., *Geog* VII, 2, 21) as it is for sticks, shields and riding switches in modern Africa (Keller, *Die antike Tierwelt*, I, p. 406). Other commercial products were hippo. blood which was used in painting (Plin., op. cit., XXVIII, 121) and fat which was employed by the Egs. against the falling-out of hair (Erman-Ranke, *Ägypten*, p. 261).

Ingenuity has not been lacking in attempts to explain the infelicities :

1. Steier suggests (*RE* XVII, 567 ff.) that two different animals have been confused, pointing out that many elements suit an ox better. He favours the gnu—the White-bearded Gnu to be exact—which was certainly known to the Gks., has much the same distribution as the hippo., a similar colour and the mane and tail of a horse.
2. Obst (*Klio* 14 (1915), p. 390 ff.) extricates H. from the embarrassing comparison with the horse by suggesting that he had only seen a hippo. skeleton!

These remedies seem extremely unlikely. They are based on the premise that, when an observer sees a completely new animal which has no parallel in his own country, he will still be able to describe it correctly. In fact, descriptions of animals are subject to the same perils as any other type of description. In the case of *ὄψις* there is the problem of getting a good view (Introduction, p. 77 ff.). The animal may, in fact, be wholly or partly covered in water or half hidden by reeds. It may also be lurking some distance away. Furthermore, the watcher may be labouring under the disadvantage that the creature had long been called a *ἵππος ποτάμιος* for no better reason than that, like the Eng. "Sea-Horse", its head bore some resemblance to that of a horse. If the observer then tries to compose a description, possibly after the lapse of some time, on the basis of the name (a point taken by Obst, op. cit., p. 391), his experience of horses and a partial view of the hippo., he will probably end up with a similarly bizarre result. Surely, this explains the disastrous efforts of Hec., or his predecessor. The account then became canonical, so firmly entrenched that it became the basis of all further efforts. The consistent failure to correct its errors will arise from the difficulty of seeing the beast and the natural tendency for a tradition, once accepted, to continue.

Bibliography : Anderson, *Zoology. Mammalia*, p. 356 ff.; Keller, *Die antike Tierwelt*, I, p. 406 ff.; Steier, *RE* XVII, 567 ff.

72. Γίνονται δὲ καὶ ἐνύδριες : *Lutra vulgaris. Pace* earlier commentators (e.g. Wiedemann, *Kommentar*, p. 310; Hopfner, *Tierkult*, p. 58) H. is undoubtedly referring to otters (Keimer, *BIE* 36 (1955), p. 458 ff.; id., *Études*, IV, p. 1 ff.). The absence of any evidence of a cult might have one of two causes :

1. We are confronted with an example of religious unorthodoxy amongst the local peasantry of some area which H. had visited.
2. The Egs. included the otter in the ichneumon cult by the same zoological laxity which has already been noticed elsewhere (n. II, 67). This is perhaps supported by Amm. (XXII, 15, 19) who speaks of the otter as a kind of ichneumon.

λεπιδωτὸν : *Barbus bynni* (Boulenger, *Zoology. Fish*, p. 203). This species can weigh as much as 12 lbs. and is extremely common in the Nile, being found in the Bahr Yûsuf, irrigation ditches and ponds as well as the main stream. Though the flesh is enjoyed by Egs., to a European taste it is flabby and insipid. Mummified examples are mentioned by

Saint-Hilaire (*Description de l'Égypte*, XXIV, p. 288). Its great cult centre was Lepidotonpolis in the Thinite Nome (mod. Mesheikh) where it was connected with both Meḥit and Onuris and where excavations brought to light a chapel containing many Saite bronze figurines of the fish (Daressy, *RT* 10 (1888), p. 141). There is also archaeological evidence of a cult at Athribis (Engelbach, *ASAE* 24 (1924), p. 182) and Abydos (Ayrton-Currelly-Weigall, *Abydos*, III, pl. XXI, 4). In Str.'s time, however, it was worshipped throughout Egypt (XVII, 1, 40 (C812)).

τὴν ἔγχελυν : *Anguilla vulgaris* (Boulenger, op. cit., p. 402 ff.) is found in the Nile, though it is not common. It used in fact to ascend the river as far as the Second Cataract but was rare above the First. As far as Eg. evidence is concerned, it played little part in cult. Daressy (*RT* 26 (1904), p. 133 ff.) mentioned three bronze eels at Cairo which came from Sais and were dedicated to Atūm, while the British Museum has two small eel mummy cases of the same material (B.M. 27581 and 36151) both Ptol., both dating from about 200 B.C. and both from Naucratis. Petrie found no fewer than 13 such cases on this site and mentions that Arab dealers had got their hands on numerous other examples (*Naukratis*, I, p. 41 ff.). They are, thus, all from the Delta and from places which H. had visited, facts which, combined with the omission of much more important fish cults (e.g. Oxyrhynchus), provide striking proof of the local nature of his information.

These fish were not, as H.'s implies, the only species held sacred. Cults such as those of the Oxyrhynchus (Str., l.c.), Latus (ib., 1, 47 (C817)) and Phagrus (Plu., *DIO* 7 (*Mor* 353)) were extremely popular and fish amulets exist in great numbers (Petrie, *Amulets*, pl. XLIII).

ἱροὺς δὲ τούτους τοῦ Νείλου : Fish cults are generally associated with female deities. This fact suggests that they were deified because of an apparent connection with the fructifying properties of the Nile and H. is, therefore, in all probability basically correct. Again, however, as with nearly every animal cult, we find an ambivalent attitude. While fish certainly could be regarded in a favourable light, we find them treated from an early period as an abomination (cf. *Urk* I, 173, 202; Hopfner, op. cit., p. 150 ff.). Indeed, in Hieroglyphic the notion of impurity is generally determined by a fish (Gardiner, *Egyptian Grammar*^{3}, Sign List, K2). It is only very rarely found on the offering tables of the gods and the dead, however important it may have been as an article of diet, and in the L.P. we find the Ethiopian conqueror Piankhi showing himself particularly intransigent on this point and refusing to have dealings with Eg. princes who had eaten it (*Urk* III, 54 ~ *BAR* IV, § 882). At Edfu, the great cult centre of Ḥorus, they were regarded as Typhonic creatures because the Oxyrhynchus-fish, together with the Phagrus and Lepidotus, had swallowed the male member of Osiris when he had been cut up into pieces by Seth (Plu., *DIO* 18 (*Mor* 358)) and at the Great Feast of Edfu fish were trampled into the ground to symbolize the destruction of the forces of Chaos (Alliot, *Le Culte*, II, p. 524 ff.).

Bibliography (Fish Cults) : Dölger, *Ichthys*, II, p. 101 ff.; Hopfner, *Tierkult*, p. 150 ff.; Bonnet, *RÄRG* p. 191 ff.; Kees, *Götterglaube*², p. 64 ff.; Helck-Otto, *Kleines Wörterbuch*², p. 104.

τῶν ὀρνίθων τοὺς χηναλώπεκας : Probably *Chenalopex aegyptiaca*; Eg. *smn* "*smn*-goose" which occurs frequently on monuments (Kuentz, *Arch. du Mus. d'Hist. Nat. de Lyon*, 14 (1926), passim). A description will be found ap Nicoll, *Handlist*, no. 301. H. states that the goose was sacred to the Nile, while Ov. (*Fast* I, 454), Juv. (VI, 540 ff.) and Paus. (X, 32) connect it with Isis. In point of fact, available Eg. evidence supports neither of these opinions. Basically it was the mysterious nature of its life in the marshes which led to its divinization (Kees, *Götterglaube*², p. 45 ff.). The sudden emergence of this noisy fowl from the monotonous and still expanses of papyrus marsh must indeed have seemed to the Eg. a striking parallel to the emergence of life from the primeval waters. It was, therefore, a suitable embodiment of the *Urgott*, the creator of all things, and naturally gave rise to the myth of the "Great Cackler" who was claimed to have emerged from the Primeval Egg at the beginning of the world (Bonnet, *RÄRG* p. 162 ff.). Under these circumstances nothing could be easier than that the goose should be related to the creator-gods of Eg. Religion and this process is actually discernible in the case of at least two—Geb and Amon-rēʿ (Kuentz, op. cit., p. 44 ff.; Sethe, *Amun und die acht Urgötter*, § 36; Bonnet, op. cit., p. 199 ff.). Within such a context the Nile God Ḥapi would fit very well. Like the "Great Cackler" he is associated with the primeval waters of Nūn of which the river itself was considered to be an efflux (Bonnet, op. cit., pp. 525, 536) and like the creator-god Geb he is often called "Father of the Gods" (Bonnet, op. cit., pp. 203, 525). Hence, the association of the *smn*-goose with Ḥapi would occasion no surprise and, even though Eg. evidence gives no indication that such a relationship existed, we can accept H.'s explicit statement on the matter with confidence. In all probability he has in mind a purely local worship which has left no trace in our tradition. It is, however, worth noting that even the goose is not exempt from the characteristic ambivalence of Eg. animal cults. Since it was continually included amongst divine offerings and since the latter were regarded as embodiments of Seth and his confederates (n. II, 38), it developed marked Typhonic associations (Sethe, *Dram. Texte*, p. 101; Junker *Onurislegende*, p. 3; id., *ZÄS* 48 (1910), p. 73). Mummies have occasionally come to light, though few in number (Lortet-Gaillard, *La Faune Momifiée*, IV, p. 154 ff.).

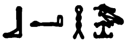
Bibliography : Lortet-Gaillard, *La Faune Momifiée*, IV, p. 154 ff.; Hopfner, *Tierkult*, p. 122; Nicoll, *Handlist of the Birds of Egypt*, no. 301; Kuentz, *Arch. du Mus. d'Hist. Nat. de Lyons*, 14 (1926), passim; Sethe, *Amun und die acht Urgötter*, §36; Bonnet, *RÄRG* p. 199 ff.; Kees, *Götterglaube*², p. 45 ff.

73. **Ἔστι δὲ καὶ ἄλλος ὄρνις ἱρός, τῷ οὔνομα φοῖνιξ :** The word *φοῖνιξ* derives from the Eg. *bnw* "*bnw*-bird" probably pronounced *boine* (Sethe, *ZÄS* 45 (1908), p. 84 ff.; Spiegelberg, ib. 46 (1909), p. 142.) and probably cognate with *wbn* "to rise" and *bnbn* "solar pyramidion" (Helck-Otto, *Kleines Wörterbuch*², p. 276) though the ground is treacherous (Baines, *Orientalia* 39 (1970), p. 389 ff.). The Gk. form has, however, been affected by assimilation to the proper name *Φοῖνιξ* (for which vide Rose, *Handbook of Gk. Mythology*, pp. 183 ff., 240 ff.) just as Eg. *3bḏw* was assimilated to Gk. *Ἄβυδος*. The actual species of the *bnw*-bird varies in Eg. representations. In the earliest texts it is small and defies exact identification. Possibilities are the water wagtail (Sethe, *Urgeschichte*, § 31) and golden plover (Wreszinski, *Atlas*, III, p. 112, n. 3). From the M.K. onwards it is certainly one of the *Ardeadae* of which several species are identified in Egypt (Nicoll, *Handlist*, p. 63 ff.). The known representations are of the *Ardea purpurea* (Purple Heron), which has elements of red in its colouring, or the *Ardea cinerea* (Grey Heron).

ἐγὼ μέν μιν οὐκ εἶδον εἰ μὴ ὅσον γραφῇ : Note how careful H. is to define his source (vide Introduction, p. 83). Some elements in the account certainly derive from Hec. (*FgrH* I, F. 324) but, in addition to the *ὄψις* here mentioned, *ἀκοή* is also involved (vide infra and Introduction, p. 131). The fact that H. saw only a representation (vide supra) does not prove, *pace* Rusch (*RE* XX, 1, 417), that a living *bnw* was not kept at Heliopolis. Indeed his *ἄλλος ὄρνις ἱρός* suggests at the very least that he regarded the Phoenix in the same light as the Nile-goose, ibis etc.

καὶ γὰρ δὴ καὶ σπάνιος ... ἐς τοῦ Ἡλίου τὸ ἱρόν : The Phoenix Legend. This is best discussed in two parts :

1. Eg. Myth.
2. Gk. Myth.

1. *Eg. Myth.* In Eg. mythology the *bnw* was originally connected with the solar cult. The key to this association lay in the fact that, whatever the species, it was a water bird. Indeed, the heron was so intimately associated with the flood that it was used to determine the word  *bʿḥ* "inundation" (*Wb* I, p. 448, 1-8). This water bird perched on an object protruding from the waters would suggest the image of life emerging from the primeval hill as it rose amidst the waters of Nūn, source of all creation. This idea would then immediately bring it into the Heliopolitan Theology. There it was naturally related to the *bnbn* stone, a conical stone fetish symbolic of the primeval hill (Kees, *Götterglaube*^{2}, p. 217 ff.) on which, in the earliest known reference (*PT* 1652), it is said to rise in exactly the same way as the sun-god himself whose manifestation and soul (*bꜣ*) the *bnw* very quickly became. At Heliopolis the *bnw* was also associated with the *ỉšd*-tree (*Urk* IV, 591; Sander-Hansen, *Die Texte der Metternichstele*, 90 ff.) on which, according to one tradition, it was born (Sander-Hansen, op. cit., 77). This tree actually stood in the "House of the *Bnw*" and since it functioned, in particular, as the repository of information on earthly events of great cosmic importance e.g. Pharaoh's accession and Sed-Festivals (n. II, 3, 1), the *bnw* sometimes receives the title "Lord of Sed Festivals" (Pleyte, *Drie Handschriften*, pl. 1; cf. Naville, *Tb* XXIV Aa) and thereby acquires an explicit connection with time. Later, with many another solar trait, the *bnw* was taken over into the cult of Osiris with whom it held a relationship similar to that with Rēʿ. The recurrent association with the *bꜣ*, whether

it be that of Rēʿ or Osiris, explains the oft-mentioned capacity of the Phoenix to change its shape (*in primis BD* Ch. LXXXIII; cf. Erman (trans. Blackman), *Literature*, p. 217); for it was the *bꜣ* which was regarded as the source of this accomplishment (Vandier, *La Religion Égyptienne*^{2}, p. 123).

Bibliography : Wiedemann, *ZÄS* 16 (1878), p. 89 ff.; Zimmermann, *Die ägyptische Religion*, p. 123 ff.; Rusch, *RE* XX, 1, 417; Rundle Clark, *UBHJ* II(1) (1949), p. 1 ff.; II(2) (1950), p. 105 ff.; Bonnet, *RÄRG* p. 594 ff.; Zandee, *BiOr* 10 (1953), p. 108 ff.; Kees, *Götterglaube*^{2}, Index, s.v. Phoenix; Montet, *DG* I, p. 161 ff.; Thausing, *Mitteilungsblatt der Gesellschaft für Ganzheitsforschung* 2(5) (1958), p. 8 ff.; McDonald, *Phoenix* 14 (1960), p. 187 ff.; Kolta, *Die Gleichsetzung*, p. 111 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 276.

2. *Gk. Myth.* The earliest Gk. reference is found in an alleged fragment of Hes. (F.304 (Merkelbach-West)) who emphasizes its longevity. The Phoenix was subsequently discussed by Hec. (vide supra) who contributed something at least to H.'s account, the first detailed exposition available. According to the latter, it came to Heliopolis from Arabia every 500 years to bring its father wrapped in a ball of incense for burial. No such *λόγος* is known from Eg. texts but its origins can be established with some probability by analysis of its ingredients. They fall into two categories :

(1) There are many items derived from the Eg. *bnw* myth—brilliant colouring, connection with time, eastern origin, myrrh, the egg (vide nn. infra).

(2) There are elements which point to foreign influence—absence of rebirth motif, confusion in the rôle of the egg—and once to specifically Gk. meddling viz. the item *ἐγκειμένου δὲ τοῦ πατρὸς γίνεσθαι τὠυτὸ βάρος* which is redolent of a peculiarly Gk. paradoxography (cf. Introduction, p. 145 ff.).

We must, then be, dealing with a Gk. reworking of Eg. mythology. H. could get Eg. assent to it as a native product (*ὡς Ἡλιοπολῖται λέγουσι*) either because it was similar enough to Eg. myth to satisfy his interlocutors when he retailed it to them or because it had already been injected into the stream of Eg. tradition (Introduction, p. 109 ff.). The various later classical traditions can all easily be explained as the development of elements in H.'s account. The two major additions are :

I. The Phoenix is either reborn from the remains of its predecessor, usually from a worm which emerges from them (Plin., *HN* X, 4), or is consumed by fire and reborn in the flames. This last element could have been derived from Eg. sources by further Gk. enquiries (cf. de Buck, *CT* 36, BIL) if indeed one needs any explanation beyond the consistent connection with the sun (e.g. Plin., op. cit., X, 2; Tac., *Ann* VI, 28; Claud., XXII, 419).

II. Though the Phoenix is always long-lived (cf. Hes., l.c.; Plin., l.c.; Mart., V, 7) it later became eternal (cf. Lact., *De Av Phoen*)—an idea which is intimately bound up with the concepts of rebirth and renewal and as such was eagerly taken over by the Christian Church (vide Türk ap Roscher, *ML* III, 3466 ff. for iconography).

Bibliography : Türk ap Roscher, *ML* III, 3450 ff.; Rusch, *RE* XX, 1, 414 ff.; Hubaux-Leroy, *Le Mythe du Phénix dans les Littératures Grecque et Latine*, passim; van den Broek, *The Myth of the Phoenix*, passim.

σπάνιος ἐπιφοιτᾷ σφι δι’ἐτέων ... πεντακοσίων : The famous Phoenix-cycle for which 500 years is the normal but not invariable length. Tac. (*Ann* VI, 28) has 1461 i.e. a Sothic Cycle (cf. Sethe *ZÄS* 66 (1931), p. 3; Tz. (*H* V, 397 ff.) 7006; Solin. (XXXIII, 13) 12954; Hes. (l.c.) 972 *γενεαί* etc. While there is no suggestion of any such period of time in Eg. sources, the *bnw* was related to time in various ways :

(a) The *bnw* was connected with the *ỉšd*-tree :

  I. Since the Phoenix was concerned with the beginning of life and since the accession of the king, to which the *ỉšd*-tree bore some relationship, was regarded as the beginning of a new cycle, the Phoenix might have been viewed as being connected with this cycle. This, however, has no fixed length.

  II. Through the *ỉšd* the *bnw* was connected with the Sed-Festival i.e. the beginning of a new era, though this again had no fixed length.

(b) As *Ḫprỉ*, the morning-sun (*BD* LXXXIII), the *bnw* could be said to begin a new cycle.

(c) *BD* l.c. shows the Phoenix connected with Chonsu, a lunar deity and as such closely connected with Thoth, a moon god whose particular concern was the measurement of time (Bonnet, op. cit., p. 141; cf. Mariette, *Dendérah*, IV, pl. 77 (a)).

(d) *BD* CXXV Intro. Nu (Budge) seems to imply the connection of the *bnw* with the *ḥsb ḳd* or *i͗pt ʿ3t* which is believed to have been originally the winter solstice and later the spring equinox (Thausing, *MDAI*(*K*) 8 (1938-9), p. 60).

(e) Ranke (*ZÄS* 78 (1943), p. 54) deals with an Eg. name of the First Intermediate Period *Bnw i͗w* "The *bnw* has come", and this he relates to names such as *Ḥpy i͗w* "The Apis has come", which expressed the joy of the people at the manifestation of the god. This, of course, would be a corollary of the unexpected nature of the event and, therefore, regular cycles are not likely to be in question. This similarity to the Apis suggests that there was a single bird (so normally from *PT* 1652 to the Metternich Stele (l.c.), a century after H.), a heron, distinguished by some sign which perhaps appeared in the temple enclosure and when it alighted on some sacred object—either *bnbn* or *i͗šd*-tree—was immediately hailed as the manifestation of the first created thing (cf. also Jéquier, *Considérations*, p. 95). Indeed, for the *Ardea purpurea* to alight on any tree, much less the *i͗šd*, would be most unusual (cf. Nicoll, *Handlist*, p. 63) and with early man the unusual is half-way to the divine.

Thus, the *bnw* can begin either regular cycles (day (b), year (d)) or eras of irregular length (reigns (a)I), the period between jubilees ((a)II), *bnw* eras (e) while (c) gives a general connection with the passage and measurement of time. H.'s 500 year Phoenix-cycle probably arose in the following way. By combining (e) with (b) or (d) a Gk. could get the idea that a new *bnw* appeared at intervals of a fixed number of years. The choice of the precise length for the cycle was secondary and quite arbitrary, as the wide divergence in classical sources indicates, but, to agree with such a wonderful creature, a period of unusual length would be obligatory and H., or his source, simply chose half a millennium as a satisfactorily long round figure. To reach this point of evolution from Eg. premises the Gks. had had 200 years by H.'s time and also were ably assisted by the conviction that the time-scales of the rest of the world simply did not apply on the banks of the Nile.

Ἡλιοπολῖται : Cf. II, 3, 1—hence probably priests of Rēʿ. The bird is usually connected with Heliopolis, rarely with Busiris (*BD* C) because of the identification with Osiris, Herakleopolis (*BD* CXXV, Intro. 18), and the Serapea of Tanis and the 7th Nome of U.E. (Brugsch, *DG* p. 191 ff.).

τὰ μὲν αὐτοῦ χρυσόκομα τῶν πτερῶν, τὰ δὲ ἐρυθρά ... : No representation of the Phoenix known to me is this colour, though herons can at least be partly reddish. However, Eg. iconography is not accurate in this respect (Meinertzhagen, *Nicoll's Birds of Egypt*, p. 59). The gold will be due to its solar connections. Indeed the splendour of its plumage was ever increasing for that very reason (Lact., *De Av Phoen*; Plin., *HN* X, 3) and by a very natural development the creature was later regarded as closely similar to the peacock (Ach. Tat., III, 25). The resemblance to the eagle led to identification with it (Türk ap Roscher, *ML* III, 3470). It is a curious fact that *Job* 29, 18 and *Psalms* 103, 5 mention an eagle-like creature which seems to resemble the Phoenix.

ἐξ Ἀραβίης ὁρμώμενον : This is standard. Although India (Aristid., *Or* XLV, 107, 5), Syria and Assyria (Ov., *Met* XV, 392-407; Mart., V, 7) and Ethiopia (Hld., *Aeth* VI, 3) occur as alternatives, there is no real contradiction, since these terms could all be used more or less vaguely of the East in general (Türk ap Roscher, op. cit., 3462). The *bnw*'s connection with that area obviously arises from its close solar affinities. *BD* LXXXIII identifies it with Chopri, the morning-sun i.e. the sun in its eastern horizon. Note also the importance of the *bnw* in the E. Delta (Montet, *DG* I, p. 189).

ἐν σμύρνῃ : The *bnw*'s connection with incense is standard (Ach. Tat., III, 25; Tz., *H* V, 387 ff.) and is probably of Eg. origin since the word *bnw* will have sounded similar to two Eg. words connected with it—*bnn* "Myrrh as medicament" (*Wb* I, p. 460, 8-9) and *bnb* "Man from the land of myrrh" (ib., p. 459, 4). Myrrh also harmonizes well with the eastern origin of the bird both for the Gks. (cf. H., III, 107 ff.) and the Egs. to whom Punt, the land of incense, lay somewhere vaguely in the S.E.

τῆς σμύρνης ᾠὸν πλάσσειν : The egg in Egypt is often symbolic of birth and is connected with the creation of the world (Bonnet, op. cit., p. 162). Indeed we have a bronze representation of a *bnw* emerging from one (Wiedemann, *ZÄS* 16 (1878), p. 104). Zandee (*JEOL* 8 (1942), p. 585) suggests that there may here be a reference to the mummy of a sacred animal but heron mummies have not yet been identified in Egypt (Jéquier, *Considérations*, p. 96).

74. Εἰσὶ δὲ περὶ Θήβας ἱροὶ ὄφιες ... τοῦ θεοῦ φασι εἶναι ἱρούς : Eg. religious interest in the snake centred around :

(a) Its mode of life which suggested chthonic and fertility associations.
(b) The dangerous character of some species.

It is (b) which is the more important in giving rise to cults.

Egypt boasts two poisonous species—the horned viper (*Cerastes cornutus*) and the cobra (*οὐραῖος Naja haje* L.) of which the latter is the only certain *ἱρὸς ὄφις*. That the motive was generally *captatio benevolentiae* (Introductory n. II, 65-76) emerges clearly from the fact that it is always associated with tutelary goddesses—Wadjet, the tutelary goddess of L.E., Renenutet (Gk. Thermuthis), a fertility deity and protectress of granaries, and Meritseger, though R. obviously owes something to (b) as well. R. and M. were particularly popular *περὶ Θήβας*, Meritseger enjoying great popularity amongst the necropolis workmen of Deir el Medineh as guardian of W. Thebes.

Bibliography : Hopfner, *Tierkult*, p. 136 ff.; Davies, *MMA* 1929, p. 41 ff.; Bruyère, *MIFAO* 58 (1930); Bonnet, *RÄRG* p. 681 ff.; Kees, *Götterglaube*^{2}, p. 52 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 323.

ἱροὶ ὄφιες ... δύο κέρεα φορέουσι ... τῆς κεφαλῆς : Cf. IV, 192. *Cerastes cornutus* "horned viper", a desert-dwelling species found widely in N. Africa and not to be confused (as by Hopfner, op. cit., p. 138 and many others) with the related but hornless *Cerastes vipera* (Keimer, *Études*, VII, passim). For an excellent classical description vide Philum., *Ven* XVIII, 1. Zoology ap Anderson, *Zoology. Reptilia*, p. 326 ff. No certain religious associations are known but there are slight indications that Meritseger was connected with the viper :

1. Though often represented as a cobra, she sometimes appears as a snake which might easily be a viper (Bruyère, op. cit., figs. 45, 54, 59-62).
2. According to Wilkinson (*Manners and Customs*, IV, p. 248; V, pp. 124, 247) viper mummies were found in her chapel at Sheikh abd el Kurnah. Since the species is very common in the area—and doubtless was in antiquity—this is not in the least surprising but caution is necessary since such mummies are mentioned elsewhere only by Vyse (*Pyramids*,

III, App. p. 88 on Perring's authority) and none are known to exist today (Lortet-Gaillard, *La Faune Momifiée*, I, p. 184; Gaillard-Daressy, *La Faune Momifiée*, p. 120 ff.).

This evidence amounts, then, to far from conclusive iconography and two 19th Century identifications of mummified animal remains—perilous foundations!

ἀνθρώπων οὐδαμῶς δηλήμονες : Quite mistaken. The bite of the horned viper is not normally lethal to a healthy adult (Anderson, op. cit., p. 333 ff.) but is, even so, almost invariably accompanied by extremely unpleasant symptoms—fierce burning pains in the vicinity of the wound, great swelling, etc. Death, when it does come, "is unlikely to be painless or elegant" (Bellairs-Carrington, *The World of Reptiles*, p. 124; cf. Morris-Morris, *Men and Snakes*, p. 70; Bellairs, *Reptiles*, p. 157). H.'s error may be based on quite exceptional circumstances (e.g. Anderson, op. cit., pp. 319, 333 ff., mentions the possibility that some people may acquire an immunity) or some confusion (e.g. the Egs. kept venomous *Schutzschlangen* in their homes (Hopfner, op. cit., p. 140 ff.). H., or his source, may have found it difficult to believe that they were dangerous).

μεγάθεϊ ἐόντες σμικροί : Anderson's measurements are 22 cms. 5 mms.-73 cms. 5 mms. (op. cit., p. 334) but the horned viper normally attains a length of c. 45 cms., rarely more than 60-70 cms. (Keimer, op. cit., p. 15, n. 1).

δύο κέρεα φορέουσι πεφυκότα ἐξ ἄκρης τῆς κεφαλῆς : The twin horns, which are lacking in many members of the species, emerge as spines above each eye, though modern Egs. have been known to insert fake horns made of hedgehog quills *et sim.* to enhance a captive's commercial value (Keimer, op. cit., p. 11), a practice not unknown in antiquity (cf. Nic., *Ther* 261; Plin., *HN* VIII, 85).

τοὺς θάπτουσι ... εἶναι ἱρούς : There is no evidence that the horned viper, or any other snake, was sacred to Amūn. To solve the dilemma the following evidence seems relevant :

1. Amūn has clear mythological connections with serpents :

(a) He is related to the *Km-ꜣt·f* snake in two ways :

   (1) He was identified with it and, as such, at least in the XXXth Dyn., received offerings at Medinet Habu (Sethe, *Amun und die acht Urgötter*, § 106).
   (2) He was regarded as its soul (op. cit., § 38).

(b) A., in his capacity as a creator-god, was closely associated with the *ʾIr*(*w*) *tꜣ* "Earth-creator"-Serpent (Sethe, op. cit., § 110).
(c) A. had affinities with the *ʿḥʿw*-snake which was also connected with the creation (*Urk* VIII, 18b).

2. The snake-goddess Meritseger who may have been connected with the *Cerastes* (vide supra) is commonly found on stelae together with Amūn (e.g. Bruyère, op. cit., figs. 80, 85). One *ex voto* representing her actually comes from Karnak (Maspero, *Guide au Musée du Caire*, 1915, no. 470, fig. 52).

3. H. was expressly told that the horned viper was sacred to Amūn.

1 and 3 suggest that Amūn's mythological affinities with snakes had, by H.'s time, given rise, in certain quarters at any rate, to the idea that the horned viper was sacred to him. The choice of species could be fortuitous but datum 2 raises the possibility that the connection with *Cerastes* arose because of Amūn's association with Meritseger. If this is correct, it is likely enough that the inhabitants of W. Thebes played an important part in bringing about such a development. The burial of the *ἱροὶ ὄφιες ἐν τῷ ἱρῷ τοῦ Διός* would be a perfectly acceptable corollary (cf. the burial of the sacred crocodiles in the Labyrinth n. II, 148, 5). At all events, we have more than enough to justify us in giving H. the benefit of the doubt.

75. κατὰ Βουτοῦν πόλιν : B. = *ʾImt* in the E. Delta whose ruins lie at mod. Tell Faraʿun (Nebesheh) about 8 miles S.E. of Tanis (Petrie, *Tanis*, II, pp. 28, 37; Gardiner, *AEO* II, pp. 170* ff., 191* ff.; Montet, *DG* I, pp. 173, 180). By H.'s time the area had long been familiar to the Gks. through the mercenary settlements at Nebesheh, the *Στρατόπεδα* and Daphnae (Introduction, p. 16 ff.).

πυνθανόμενος περὶ τῶν πτερωτῶν ὀφίων : Cf. III, 107; Mela, III, 82; Solin., XXXII, 33; Isid., *Etym* XII, 4, 29; Ael., *NA* II, 38; Amm., XXII, 15; Plin., *HN* X, 75. Isaiah, in a suspect passage (30, 6), also speaks of flying serpents between Egypt and Palestine. H. may owe something to Hec. :

1. Since the *'Imt* area was occupied by Gk. mercenaries from the XXVIth Dyn. (vide supra), the *λόγος* may have found its way to E. Greece at any early period.
2. H. had heard of the *πτερωτοὶ ὄφιες* before.
3. This section contains a number of known borrowings from Hec. (70-71, 73).
4. There is a strong emphasis on autopsy (vide Introduction, p. 83, n. 13).

What are these *πτερωτοὶ ὄφιες*? H. mentions three characteristics :

(a) They come from the E. (*ἅμα τῷ ἔαρι ... ἐκ τῆς Ἀραβίης πέτεσθαι ἐπ' Αἰγύπτου*; cf. III, 107).
(b) They have the shape of *ὕδροι* (II, 76, 3).
(c) They fly by means of *πτίλα* which closely resemble the wings of a bat (l.c.).

This is all derived by *ἀκοή*. H.'s *ὄψις* is confined to what appeared to be skeletal remains. Several explanations have been offered :

(a) Anderson (*Zoology. Reptilia*, p. 321 ff.). "The dilatable neck of the cobra and the exact attitude assumed by the anterior part of the body when the animal is excited, probably originated the myth about the existence of flying serpents in Egypt, mentioned by Herodotus and other authors, ancient and modern; but as the *Uraeus asp* was occasionally represented on the monuments with wings, this may possibly have accentuated the belief in such flying monsters".
(b) Sethe (*RE* III, 1088) relies entirely on iconography, observing that the cobra goddess Wadjet, who was worshipped at Buto, is often represented as a winged serpent. The Gks. who had lived in the E. Delta would have observed such representations and developed the tradition that actual winged serpents appeared occasionally in the area.

(c) Rawlinson (*Herodotus*, II, p. 124), Lankester (*Science from an Easy Chair*, p. 124) and Hutchinson (*CQ* N.S. 8 (1958), p. 100 ff.) suggested that the winged serpents were locusts.

(d) Wiedemann (*Kommentar*, p. 318 ff.) and Keller (*Die antike Tierwelt*, II, p. 301) identify with the flying lizards of S.E. Asia (*Draco volans*, Bellairs, *Reptiles*, p. 162) and there is much in favour :

1. Str. (XV, 1, 37 (C703); cf. Ael., *NA* XVI, 41) when discussing the fauna of India speaks of *διπήχεις ὄφεις ὑμενόπτεροι, ὥσπερ αἱ νυκτερίδες*. This suggests that *Draco volans* was known in an area to which Gks. penetrated at least as early as Scylax.
2. Their wings can be described as bat-like (Bellairs, l.c.).
3. H.'s winged snakes are closely associated with trees (III, 107) and *Draco volans* does in fact glide amongst them (Keller, l.c.).
4. Head and tail could be compared with those of a snake (cf. Bellairs, op. cit., fig. 11 N).
5. Arabia is often little more than a vague term for East.

Of these (c) seems least likely. The kernel of the *λόγος* was probably the concept of a flying serpent derived either from iconography ((a) & (b)) or from the habits of the horned viper which is capable of flinging itself as much as three feet through the air when making an attack (Anderson, op. cit., p. 333). III, 107 suggests, however, that the tradition had been elaborated, possibly by vague information on *Draco volans* (d) obtained by such travellers as Scylax during the eastwards expansion of the Persian Empire.

ἀπικόμενος δὲ ... οὗτοι : H. clearly saw something which could be taken for snake skeletons but what it was is a complete mystery.

ἐσβολὴ ἐξ ὀρέων στεινῶν ἐς πεδίον μέγα : This suggests a pass running into Egypt from the Arabian desert in the region of E. Delta. Directly E. of *'Imt* lies the old caravan road to El Kantara and Syria. In the stretch parallel to the S.E. end of L. Menzala running 10-15 kms. W. of the Suez Canal (Baedeker, *Egypt*^{7}, m. between pp. 184-5) is an area which fits H.'s description well :

(a) There are elevations to N. and S. of the road forming a pass (*ἐσβολὴ ἐξ ὀρέων στεινῶν*).

(b) To the W. this pass leads to a broad sandy plain which in turn gives access to the alluvium (*ἐς πεδίον μέγα ... τῷ Αἰγυπτίῳ πεδίῳ*).

The identification with the Wadi Tumilat (Sourdille, *La Durée*, p. 76 ff.; How-Wells, *Commentary*, I, p. 204) is out of the question. Even H. could not describe it as *κατὰ Βουτοῦν πόλιν μάλιστά κῃ κείμενος*.

καὶ τὴν ἶβιν διὰ τοῦτο τὸ ἔργον τετιμῆσθαι λέγουσι Ἀράβιοι ... τὰς ὄρνιθας ταύτας: The matter is certainly not as simple as this. The bird was sacred to Thoth, the moon-god, an ascription which Kees explains as follows :

> "Offenbar traute der Ägypter dem eifrig suchenden Ibis besondere Geschicklichkeit im "Finden" zu, also auch besondere Erfahrung und Klugheit, die ihn zur kosmischen Ausweitung als Mondgott geeignet machte : die Mondmythen betonen die Motive des Suchens, Findens und Bringens des bei Neumond verlorenen Mondauges". (*Götterglaube*^{2}, p. 48; in general vide Hopfner, *Tierkult*, p. 117 ff.; Dölger, *AuC* 5 (1936), p. 183 ff.; Bonnet, *RÄRG* pp. 320 ff., 805).

The *Ἀράβιοι* are evidently the inhabitants of the Isthmus of Suez area where the *ὄφιες* attempted to enter Egypt (n. II, 12, 2). The agreement of the Egs. was probably extracted by leading questions (Introduction, p. 116), since most would presumably have no idea why they worshipped the *ἶβις* but it is possible that the notion derived from popular theology.

76. εἶδος δὲ τῆς μὲν ἴβιος ... ἥδε ἰδέη : Experts disagree on the species :

(a) Meinertzhagen (*Nicoll's Birds of Egypt*, I, p. 67) believed that it is the Hermit Ibis (*Comatibis eremita*) usually referred to by Egyptologists as the Crested Ibis :

I. Its colour suits well (op. cit., p. 438).
II. It is found frequently in Hieroglyphic as the *3ḫ*-sign (Gardiner, *Egyptian Grammar*^{3}, Sign List, G25).
III. Above all its habits suit perfectly. "For unlike the other ibis, it does not frequent watery places; according to Dresser (*Manual of Palaearctic Birds*, p. 586) it inhabits 'rocky and desolate mountain ranges where it feeds on insects, snails and reptiles'.

> The cliffs and ravines east of the Nile would have suited it admirably "(Meinertzhagen, op. cit., p. 67).

(b) Keimer (*ASAE* 30 (1930), p. 23) and Hopfner (*Tierkult*, p. 117) favour the Black or Glossy Ibis (*Plegadis falcinellus*). Points in favour are :

- I. While its plumage has elements of brown, white, purple and green it looks quite black (Meinertzhagen, op. cit., p. 436 ff.). It, therefore, suits *μέλαινα δεινῶς πᾶσα* perfectly.
- II. It is found as the *gm*-hieroglyph (Gardiner, op. cit., Sign List, G28).

The crucial objection to (b) is that its habits are irreconcilable with H.'s account. Of course he may have confused the two when describing their colour but such an hypothesis is superfluous since his wording *could* apply to the *Comatibis*. We must, therefore, accept that it is to the latter that he is referring.

μέγαθος δὲ ὅσον κρέξ : According to Heuglin (*Ornithologie Nordost-Afrikas*, II, p. 1144) the *Comatibis* attains a length of 27 in. Unfortunately, the *κρέξ* has not been certainly identified (Thompson, *Glossary of Greek Birds*^{2}, p. 177) but neither major candidate, *Rallus crex* (Corncrake or Landrail) with an approximate length of 10 in. nor *Himantopus rufipes* (Blackwinged Stilt) with a length of 12 in. even approaches the size of an ibis. In view of the general eccentricity of H.'s measurements (nn. II, 8-9, 71, 148) this need not distress us unduly.

τῶν δ'ἐν ποσὶ ... ἐμφερὴς τῇ ἑτέρῃ : This description refers to the famous Sacred Ibis (*Ibis aethiopica*) and is highly accurate (Meinertzhagen, op. cit., p. 437). The bird is frequently found in Hieroglyphic (Gardiner, op. cit. Sign List, G26) and representations are common (e.g. Griffith, *Beni Hasan*, IV, pl. IX). Mummies abound (Lortet-Gaillard, *La Faune Momifiée*, I, p. 171 ff.; n. II, 67, 1) though many are Glossy not Sacred (Nicoll, *Handlist*, p. 68). This anomaly the latter ascribes to confusion but it is much more likely to arise from the fact that the main concern of the Egs. in mummification was to give the finished product a convincing appearance. When mummified and wrapped ibises, whatever the species, would look much the same—and to an Eg. that was enough.

διξαὶ γὰρ δή εἰσι ἴβιες : There are, in fact, five main species of ibis in Africa—*Ibis aethiopica* (*religiosa*), *Plegadis falcinellus*, *Comatibis eremitica* (*Ibis comata*), *Ibis hagedascha* and *Ibis carunculata* (Keimer, op. cit., p. 26) and even Eg. sources give us three. As a result of the disappearance of the papyrus no species now breeds in Egypt, though the Sacred Ibis occurred as late as 1800, such examples as do occur in the country being only migratory. It is, however, still common in the Sudan (Meinertzhagen, op. cit., p. 66).

Bibliography (Zoological) : Lortet-Gaillard, *La Faune Momifiée*, I, p. 171 ff.; Heuglin, *Ornithologie NordostAfrikas*, II, p. 1132 ff.; Nicoll, *Handlist of the Birds of Egypt*, p. 67 ff.; Hopfner, *Tierkult*, p. 117; Meinertzhagen, *Nicoll's Birds of Egypt*, I, p. 66 ff.; II, p. 346 ff.; Keimer, *ASAE* 30 (1930), p. 20 ff.

τοῦ δ'ὄφιος ἡ μορφὴ οἵη περ τῶν ὕδρων : *ὕδρος* = "water snake" clearly a member of the genus *Natrix* which boasts many markedly amphibious species including the Grass Snake (*Natrix* (*Tropidonotus*) *natrix*) (Bellairs, *Reptiles*, p. 146). According to Gossen-Steier (*RE* IIA, 554 ff.) the *ὕδρος* may be either the Grass Snake or *Tropidonotus bilineatus* Jan., a non-poisonous European species which has a viperine head and attains a length of c. $1\frac{3}{4}$ m.

77. **Αὐτῶν ... τὴν σπειρομένην Αἴγυπτον :** i.e. that part of Egypt which is arable as distinct from the N. Delta which was quite unsuitable for agriculture until a very late period and largely devoted to hunting and pastoral farming (Kees, *Ägypten*, p. 8 ff.; id., *Ancient Egypt*, p. 29 ff.).

μνήμην ... ἀπικόμην : Here *μνήμην* = *memoria* in the sense of "history". H. means that the Egs. in question are the most attentive of all man in preserving knowledge of the past. Annals such as the Palermo Stone and King Lists like the Abydos, Saqqara and Karnak Lists and the Turin Canon provided a chronological perspective stretching back to the beginnings of Eg. History and beyond to the Dynasties of the Gods millennia before Gk. traditions began whilst historical *λόγοι* of various kinds were current which provided information on major figures in Eg. History at least from the time of Menes (Introduction, p. 95 ff.). Reports of this body of lore were bound to have an immense effect on Gk. observers especially in the 6th and 5th Centuries when men like Hec. were endeavouring to bring some order into the chaos of Gk. chronology and trying to correlate it with the history of the Eastern Empires (Introduction, p. 172 ff.).

λογιώτατοι : n. II, 3, 1.

συρμαΐζουσι ... κλύσμασι : The Egs. certainly used a large variety of laxatives, purges and enemata in their medical prescriptions (Grapow, *Grundriß*, III, p. 28 ff.). They were particularly favoured for maladies of the anus (e.g. Jonckheere, *Le Papyrus Médical Chester Beatty*, p. 16 ff.) but were also used in many other contexts e.g. stomach complaints (Wreszinski, *Der grosse medizinische Papyrus des Berliner Museums*, 188-204) and gynaecological disorders (Griffith, *Kahun* I, p. 5 ff.), a fact which shows that the clyster was not simply an "agent evacuateur" but that the anus was used as a means of administering certain medicaments which were expected to be therapeutic either in a local or a general sense, provided they remained long enough in the body. The quantity introduced into the body varies from ½ to almost 1½ litres, the vehicle being water, beer or milk into which the drugs were mixed with the addition of emollients such as honey and oil. Some purges were administered on going to bed and had to be retained all night. An instruction frequently appended is that the medication should be carried on for four days—remarkably close to H.'s *τρεῖς ἡμέρας ἐπεξῆς μηνὸς ἑκάστου* (Jonckheere, op. cit., VI, 1 - VIII, 14).

νομίζοντες ... γίνεσθαι : Cf. D.S., I, 82. This theory is expressed in the clearest possible terms in P. Insinger (6, 14 ff. ~ Volten, *Das demotische Weisheitsbuch*, p. 169). Since this document dates to the 4th Century it might be argued that the idea was derived from Gk. speculations on the effects of dietetic *περισσώματα* which appear with the Pythagoreans and are common in the Hippocratic Corpus (Sigerist, *History of Medicine*, II, pp. 103, 110, 242). There is, however, good reason to believe that the doctrine is of some antiquity in Egypt. Unwholesome or excessive eating is frequently given as the cause of exogenous diseases in medical literature (e.g. Wreszinski, *Der Papyrus Ebers*, 189, 855; cf. Ghalioungui, *BIFAO* 66 (1968), p. 43 ff.). Furthermore, Steuer (*Wḫdw*) and Steuer-Saunders (*Ancient Egyptian and Cnidian Medicine*; cf. Ghalioungui, op. cit.,

p. 44 ff.; Yoyotte, *Kêmi* 18 (1968), p. 79 ff.) argue that the word *wḫdw* which frequently occurs in medical contexts denotes a putrefactive principle which was thought to adhere to faeces and was consequently localized in the rectum. This *materia peccans* has a pathological effect on the blood contained in the *mtw* "blood vessels" causing it to coagulate and be corrupted, thereby giving rise to the common suppurative conditions which occur in Egypt and eventually the decay of the body as a whole. Since *wḫdw* is adherent to faeces, disease could be forestalled by frequent evacuation thereof. For Eg. medical aetiology in general vide Ghalioungui, op. cit., passim.

εἰσὶ μὲν γὰρ καὶ ἄλλως ... ἀνθρώπων : The appalling condition of native health in Egypt today excites considerable astonishment at this statement. Sigerist (op. cit., I, pp. 222 ff., 246 ff.) suggests several factors which may explain the difference :

1. The population was probably half in H.'s time. D.S. (I, 31) gives seven millions whereas the 1938 census counted 16, 237,000. This increase would lead to a drop in the standards of health which Eg. medical services have been incapable of checking.
2. General impressions are liable to be false. The vigorous outdoor life of the peasantry would have produced a strong and robust appearance in those working in the fields, while the numerous sick would be languishing indoors.
3. H. came from Caria and both Asia Minor and the Aegean were infested with malaria in the 5th Century as the *Corpus Hippocraticum* shows. Such intermittent fevers were rare or non-existent in Egypt and this may have conditioned H.'s attitude to Eg. health in general.
4. There are a number of cultural reasons why the Egs. should have been healthier in antiquity :

(i) Great personal cleanliness (cf. II, 37, 41, 47, 64). *All classes* regularly anointed themselves with oil and ointments.
(ii) Sporting activities were keenly pursued (Favre, *L'Arte e lo Sport nell' antico Egitto*; cf. D.S., I, 53, 3-4—general implications only to be accepted).
(iii) The light linen clothing—sometimes nakedness—of antiquity was

admirably suited to the climatic conditions of Egypt whereas modern dress, whether European or Arab, is not.

τῶν ὡρέων ἐμοὶ δοκέειν ... μάλιστα : Though H. does not claim this as a statement of the Egs. themselves, their medical literature took full account of the seasons as a cause of disease and recognized that some complaints were more prevalent at certain times of the year than others (Wreszinski, op. cit., 18, 2; 61, 4-5; 61, 15; Grapow, op. cit., III, p. 42). However, this had not escaped the Gks. In the *Corpus Hippocraticum* *αἱ μεταβολαὶ τῶν ὡρέων* are frequently mentioned as a cause of sickness (*De Aer* passim; *Epid* I, II; *Morb Sacr* XIII; *Aph* III, I-XXIII etc.; Sigerist, op. cit., II, pp. 280 ff., 320 ff.; cf. Th., VII, 87, 1; Arist., *Pol* VI, 1 ff. (1327b)). Clearly H. is here being influenced by these doctrines (Introduction, p. 165 ff.). In fact, he exaggerates. Egypt has 2 *ὧραι,* summer (May-Sept.), and winter (October-April) between which there are definite climate changes (Baedeker, *Egypt*^{7}, p. LXXVI ff.; Hurst, *The Nile*, p. 168 ff.; Besançon, *L'Homme et le Nil*, p. 16 ff.). To a Gk., however, accustomed to the 4 very different *ὧραι* of the N. Med., these variations would have seemed trivial and H. could easily be left with the impression of one long *θέρος*.

ἀρτοφαγέουσι δὲ ἐκ τῶν ὀλυρέων ... ὀπτοὺς καὶ ἑφθοὺς σιτέονται : Since diet was one of the major considerations of 5th Century medicine (Sigerist, op. cit., II, p. 238 ff.), this discussion of Eg. food is a logical development of what precedes. In this section H. is undoubtedly indebted to Hec. for two reasons :

1. Hec. certainly mentioned the *κυλλῆστις* and "barley wine" (*FgrH* I, F.322-3).
2. Hec. had considerable interest in matters ethnographical (Introduction, p. 130 ff.).

ἐκ τῶν ὀλυρέων ποιεῦντες ἄρτους : *ὄλυρα* "emmer wheat" (n. II, 36, 2). Bread was the staple diet of the Egs. and the main cereal certainly was emmer wheat in H.'s time (l.c.). Since, however, barley and dried lotus seeds were also employed (n. II, 96; Kees, *Ägypten*, p. 64 ff.), H. is guilty, as often, of over-simplification (Introduction, p. 149 ff.).

τοὺς ἐκεῖνοι κυλλήστις ὀνομάζουσι : Eg. *kršt* (*Wb* V, p. 136, 2-3; Gardiner, *AEO* II, p. 228* ff.); Bab. *kunasu* "spelt, emmer wheat" (Thompson, *CAH* III, p. 249), a widely eaten species of unleavened bread (Kees, op. cit., p. 32; Spiegelberg, *Rechnungen*, p. 41). In earlier times a great variety of types of bread is known (Kees, op. cit., p. 68)—no fewer than 15 in the O.K. (Montet, *Everyday Life*, p. 85). Since the situation is unlikely to have been very different in H.'s time, we may assume that he has emphasized the k. at the expense of many other types of emmer loaves, possibly because it was the standard food of the lower classes.

οἴνῳ δὲ ἐκ κριθέων πεποιημένῳ διαχρέωνται : "Beer", Eg. *ḥnḳt* (*Wb* III, p. 169, 11-20)—the great national Eg. drink enjoyed by all from god to peasant. It was made from barley or wheat and dates and was pale, foamy and slightly acidulous, rather like the kaffir beer of the mod. Bantu. Hops were unknown but various other flavouring substances were employed to make the many different brands. Foreign brews were also imported.

Bibliography : Kees, *Ägypten*, p. 69; Montet, *La Vie Privée*, p. 242 ff.; Wreszinski, *Atlas*, I, pl. 301; Singer et al., *History of Technology*, I, p. 277 ff.; Lucas-Harris, *AEMI*^{4} p. 10 ff.; Forbes, *Studies*, III, p. 63 ff.; Lutz, *Viticulture and Brewing*, p. 72 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 65.

οὐ γάρ σφί εἰσι ἐν τῇ χώρῃ ἄμπελοι : Cf. II, 37, 4. There is no real contradiction here. The passage is concerned with U.E. and the S. Delta (vide supra, p. 330) i.e. *ἐν τῇ χώρῃ* = *ἐν τῇ σπειρομένῃ Αἰγύπτῳ*. Certainly country estates in these areas may have grown a few vines, but the vast majority of the vineyards lay either in the oases to the west of the valley or in the Delta, particularly the latter. Since H. certainly knew this district (Introduction, p. 72 ff.)—indeed there was a famous vineyard at Amet, a city which he visited (= Buto ap II, 75)—he must have been aware that wine was produced in Egypt. It always remained a drink of the upper classes and consequently found a place amongst the offerings of the gods.

Bibliography : Hartmann, *L'Agriculture dans l'Ancienne Égypte*, p. 156 ff.; Kees, *Ägypten*, p. 50 ff.; Montet, *La Vie Privée*, p. 257 ff.; Lutz, *Viticulture and Brewing*, p. 1 ff.; Lucas-Harris, *AEMI*^{4} p. 16; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 409 ff.

ἰχθύων δὲ ... τεταριχευμένους : Fish were a very important item of diet—in fact the chief source of protein for the common people (Sigerist, op. cit., I, p. 248) and are found particularly in the rations of N.K. working gangs (Christophe, *BIFAO* 65 (1967), p. 177 ff.), although religious taboos operated (n. II, 37, 4). Fishing was the major industry in the Delta and the Fayyûm and the Great Harris Papyrus (Erichsen, *P.Harris I*, passim) mentions a grand total of 441,000 in its bequests to the gods—mullet, mormyr, cat fish, batensoda, large chromis and giant perch. They were eaten dried and pickled in salt as H. says (Kees, op. cit., pl. 15; Wreszinski, *Atlas*, I, pl. 250; Klebs *AR* p. 74 ff.; *MR* p. 56 ff.; *NR* p. 86 ff.) and were even exported to Syria. On methods of fishing vide n. II, 95, 2. In general Kees, op. cit., p. 58 ff.; Montet, *Everyday Life*, pp. 79, 127 ff.

ὀρνίθων δὲ ... προταριχεύσαντες : Quails (*τοὺς ὄρτυγας*) are migratory in Egypt. During their passage large numbers fell to the ground exhausted to be caught by the Egs. in large nets. Some of the birds then had their wings clipped and were put into basket-work cages to be carried off to a poultry house where they were fattened up for the table (Wreszinski, op. cit., I, pl. 33, 108). Many, however, were plucked on the spot and hung up like joints of meat. The remainder were salted in great pots and stored. They were not very popular amongst the peasantry, but even Amūn got 21,700, almost one sixth of his entire bird ration, in quails (Erichsen, op. cit., 20b, 8). Ducks (*τὰς νήσσας*) and geese are extremely common in representations, the latter being the favourite edible fowl. Both were often bred in aviaries (Wreszinski, op. cit., I, pl. 395). The domestic hen does not occur until the time of Tuthmose III and then as an import. Wild birds were also kept and fattened up for the table.

ὀπτοὺς καὶ ἑφθοὺς σιτέονται : Birds were usually subjected to the former treatment, being plucked, spitted and cooked over a low stove (Montet, op. cit., p. 84 ff.).

78. ἐν δὲ τῇσι συνουσίῃσι ... τὰ συμπόσια ποιεῦσι : Cf. Plu., *DIO* 17 (*Mor* 357); id., *Sept Sap Conv* 2 (*Mor* 148); Lucianus, *Luct* 21. The custom had its Roman imitators (Petr., *Sat* 34). It is never mentioned in Eg. sources but the tradition is quite acceptable :

1. "It is thoroughly Egyptian in spirit" (Gardiner, *HERE* VIII, p. 22).
2. Not only parallels to but possible examples of *νεκροὶ ξύλινοι* are known (vide infra).
3. The philosophy is Eg. (vide infra).
4. After two hundred years of experience of Egypt we should expect a Gk. to get a description of Eg. *συμπόσια* substantially correct, especially when he is concerned only with actions and *dicta*, not the interpretation thereof.

It is, therefore, best to ascribe our ignorance to the extremely defective nature of our native sources. The suggestion of Stern (*ZÄS* 11 (1873), pp. 58 ff., 72 ff.) and Bénédite (*MMF* 5 (1891), p. 529 ff.) that H. is describing a mortuary feast is ingenious but unconvincing.

νεκρὸν ... ἢ δίπηχυν : Parallels are not difficult to find, though exact corroboration is unavailable. There exist many examples of little figurines of wood laid in small coffins, often very carefully painted (*ἔργῳ*) and carved (*γραφῇ*) and, in some cases, actually swathed in bandages. They date from the XIIth-XXth or XXIst Dyn. and do not exceed 10 in. in length. (Budge, *The Mummy*², p. 256 ff.; Kaiser *Ägyptisches Museum Berlin* (1967), p. 96). Although their exact significance is unknown, the facts that they often occur in tombs and sometimes bear copies of Ch. VI of the *BD* indicate that some at least were probably shabtis but that such objects could have served a purpose like that described by H. is made likely by two things :

1. Montet found mummy figurines about 18 in. long *in a private* house at Tanis (*Everyday Life*, p. 98).
2. V. Bissing (*ZÄS* 50 (1912), p. 63 ff.) describes a wooden figure 0.034 m. high which was found in an obelisk-shaped box and represented an emaciated man as he might appear before mummification. Similar figures are also discussed by Peterson (*Opuscula Atheniensia* 7 (1967), p. 21 ff.).

The purpose of neither 1. nor 2. is explicit but the context of Montet's figurines and the suspiciously amuletic quality of 2. suggest that they may both have served the living as an imperious *memento mori*. It could well be, therefore, that Budge's mummiform figures are in some cases earlier examples of H.'s *νεκροὶ ξύλινοι*. At the very least they probably give us a good impression of what they were like.

ἐς τοῦτον ὁρέων ... τοιοῦτος : The philosophy expressed is thoroughly Eg. It first manifests itself in the famous Harper Songs, the earliest dating from the time of one of the Inyotefs of the XIth Dyn., though later examples are known (Lichtheim, *JNES* 4 (1945), p. 178 ff.; Wente, ib. 21 (1962), p. 118 ff.). Their pessimistic *carpe diem* vein of thought was in later ages never far from the surface and occasionally re-emerges explicitly in poignant and moving tones e.g.

> "Drink, get drunk, cease not making holiday. Follow the desires of your heart while you are still on earth ... When a man goes his goods are lost; yea, it is his heir who does with them his will continually. There is no more sun for the rich" (Lefebvre, *Petosiris*, II, p. 90, 127. C. 100 years *post* H.).
>
> "Cease not to drink, eat, get drunk, lie with women, make holiday or follow your desire night and day. Be not downcast in your heart. What are the years, however many they may be, which one spends upon earth. As for the Western Land, it is a land of sleep, of thick darkness wherein the dead departed dwell" (Stele of Taimḥotep ap Brugsch, *Thes.*, 926. Late Ptol.).

Bibliography : Stern, *ZÄS* 11 (1873), pp. 58 ff., 72 ff.; Maspero, *Études*, III, p, 402 ff.; Bénédite, *MMF* 5 (1891), p. 529 ff.; v. Bissing, *ZÄS* 50 (1912), p. 63 ff.; Gardiner, *HERE* VIII, p. 22; Michaïlidis, *ASAE* 58 (1964), p. 227 ff.; Peterson, *Opuscula Atheniensia* 7 (1967), p. 21 ff.; Gwyn Griffiths, *De Iside et Osiride*, p. 335 ff.

79. πατρίοισι δὲ χρεώμενοι ... ἐπικτῶνται : Cf. II, 91, 1.

τοῖσι ἄλλα τε ἐπάξιά ἐστι νόμιμα : Introduction, p. 141 ff.

καὶ δὴ καὶ ἄεισμα ἕν ἐστι ... ἀείδοντες : As often H. identifies similar phenomena (cf. Introduction, p. 147 ff.).

Λίνος : Personification of the cry *αἴλινος* (*LSJ* p. 38,a, s.v. *αἴλινος*). Possibly Semitic—cf. Heb. אוֹי לָנוּ *'ôi lānû* "Woe to us" (Brown-Driver-Briggs, *HEL* p. 17, a, s.v. אוֹי) In Gk. mythology his rôle is confused—usually a famous singer who met an untimely end (Greve ap Roscher, *ML* II, 2053 ff.)—but originally a vegetation god of the Tammuz/Adonis type in whose honour a dirge was sung at the time of the vintage (*Il* XVIII, 561 ff.), presumably as a lament for the death of the grape (Frazer, *Spirits of the Corn and of the Wild*, I, pp. 216, 257).

Bibliography: Baudissin, *Studien zur sem. Religionsgesch.*, p. 298 ff.; Greve ap Roscher, *ML* II, 2053 ff.; Frazer, *Spirits of the Corn and of the Wild*, I, p. 216; Kroll, *RE* XIII, 1, 715 ff.; Rose, *Handbook of Gk. Mythology*, pp. 200, 207; Paribeni, *EAA* IV, 644 ff.; Schubert, *Artemis Lexikon*, 1736; Klein, *KP* III, 676.

ὅς περ ἔν τε Φοινίκῃ ἀοίδιμός ἐστι ... οὔνομα ἔχει : E.g. Tammuz or Adonis in the N.E. (cf. Paus., IX, 29, 8), Lityerses in Phrygia (Crusius ap Roscher, op. cit., 2065 ff.; Frazer, op. cit., p. 216 ff.) and Bormus/Borimus in Bithynia (Frazer, op. cit., p. 216).

ἔστι δὲ Αἰγυπτιστὶ ὁ Λίνος καλεύμενος Μανερῶς : The earliest reference to M. in classical literature (cf. Plu. (*DIO* 17 (*Mor* 357)), Paus. (IX, 29, 7), Poll. (IV, 54) and Hsch. (s.v.)). Plu. et al. accent *Μανέρως* (St. Byz., s.v.) but H. is correct *κατὰ* Rusch (*RE* XIV, 1048). Suidas (s.v.) appears to know an alternative name *Περιμανώς*. Many attempts have been made to find an Eg. prototype for the form. The suggestions of Wilkinson (*Manners and Customs*, II, p. 252), Schwenck (*Myth. der Ägypter*, p. 296), Brugsch (*Adonisklage und Linoslied*, p. 24; cf. Frazer, *Adonis, Attis, Osiris*, II, p. 46 and How-Wells, *Commentary*, I, p. 206) and Müller (*Liebespoesie*, p. 37, n. 1) are all unacceptable. Černý (*Misc. Greg.*, p. 60) offers an etymology *mniw-r3* "goose-herd". This is supported by Hornblower (*Man* 47 (1947), 156, p. 139) who adds that in early times a person of exalted rank might have had charge of the royal geese and might have composed a song on the death of Osiris which in time became known by his name. The word in question does not occur in Eg. documents but we do find a Gk. *χηνοβοσκός* (*LSJ* p. 1990, a, s.v. *χηνοβοσκός*) attested for Egypt in the 3rd Century B.C. There is, then, something to be said for this but any degree of confidence is impossible :

1. We have no guarantee that *Μανερῶς*/*Μανέρως* is an accurate phonetic rendering of what was heard. *R 'Imntt r 'Imntt* "to the West, to the West", a cry uttered when escorting the deceased to the tomb, might have sounded to an unpractised ear something like Maneros and equivalents could be multiplied *ad infinitum*.

2. We are far from well informed on the principles of transliteration from Eg. into Gk.

The present writer is, therefore, inclined to complete agnosticism.

ἔφασαν δέ μιν . . . τιμηθῆναι : Plu. (l.c.) somewhat differently, claiming that M. was the son of the King of Byblos—a statement which is explicable if the connection of the M.-song with the cult of Osiris postulated below is correct. He also asserts that M. was the inventor of music, probably through combining the statements of H. and the Gk. Linus-tradition. His alternative tradition that the word *Μανέρως* is not a proper name at all but an expression current at banquets meaning "May such good luck always be ours" probably arises from the contamination of II, 78 and 79.

θρήνοισι τούτοισι : The nature of the song can be determined with some degree of probability. H. gives two clues :

1. It is like the Linus-song, a statement reinforced by the note that M. was the son of a king.
2. It was a dirge (*θρῆνος*).

The first statement, in conjunction with the other sources, suggests that it had an agricultural significance and this is reinforced by the statement in Poll. (l.c.) that, like the Borimus of the Mariandynians, it was a song of the farmers. The second statement suggests that the M.-song was connected with Osiris, because the whole funerary ritual was based in the L.P. on the fiction that the deceased was Osiris and the celebrant of the rites Ḥorus (Vandier, *La Religion Égyptienne*^{2}, p. 113). We have, then, to deal with a rustic song of a dirge-like nature probably related to the death of Osiris. Now Osiris, among other things, was connected with corn (Vandier op. cit., p. 58 ff.; Bonnet, *RÄRG* p. 391 ff.) and the death of the corn (i.e. its harvesting) might well be identified with the death of the god himself. Now it was precisely at this time of the year that the Eg. farmers seem to have sung a dirge-like song in connection with the Osirian cult (D.S., I, 14; cf. also Firm. Mat., *De Errore Prof. Rel.* 2 (6-7)). There is, therefore, a strong presumption in favour of Frazer's opinion, despite certain errors of detail, that, in fact, we have to deal with an apotropaic dirge sung at harvest time to appease the corn-spirit who is being slain as the corn is cut down (*Adonis, Attis, Osiris*, II, p. 45 ff.). A possible reference to such a custom occurs in a late stele at Berlin (19400) (Roeder, *ZÄS* 55 (1918), p, 55, l. 5; cf. Bonnet, op. cit., p. 440).

Bibliography : (Maneros-problem) Schirmer ap Roscher, *ML* II, 2315 ff.; Frazer, *Adonis, Attis, Osiris*, II, p. 45 ff.; Rusch, *RE* XIV, 1048 ff.; Hornblower, *Man* 37 (1937), 200, p. 176 ff.; ib. 47 (1947), 156, p. 139; Bonnet, *RÄRG* p. 440; Gwyn Griffiths, *De Iside et Osiride*, p. 332 ff.

ἀοιδήν τε ταύτην πρώτην καὶ μούνην σφίσι γενέσθαι : An astonishing statement to extract from an Eg. Song, dance and music played an extremely important part in all aspects of Eg. life (Erman-Ranke, *Ägypten*, p. 283; Kees, *Ägypten*, p. 91 ff.; Pritchard, *ANET* pp. 365 ff., 467 ff.; *Guide to the Egyptian Collection in the B.M.* (1964), p. 92 ff.). Does H.'s error arise from some bizarre mistake in translation?

80. συμφέρονται ... ὑπανιστέαται : Respect for age was commonly enjoined in Ancient Egypt (cf. n. II, 35, 4) and can be explained by the interaction of several factors :

(1) Economic conditions in Egypt created a centralized hierarchic state and society. In such societies status in age and rank will be sharply defined (Baillet, *Idées Morales*, p. 183 ff.).

(2) In archaic societies wisdom and age are intimately associated (thus *γερουσία*; *Senatus*; "Council of Elders"). This general situation is sharply defined in Egypt because the Eg. *Weltanschauung* was dominated by the concept of an order at once physical and moral (*M3ʿt*) which came into being at the creation and which, though capable of dissolution, was regarded as *the only possible* order. *M3ʿt* can only exist in one form; any dissolution meant *total dissolution* and the reign of chaos (*'Isft*) (Bonnet, *RÄRG* p. 430 ff.; Anthes, *JAOS* Supp. XIV (1952), p. 1 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 215). This concept of the fundamentally static nature of organized society and social values means that the experience and understanding of one's elders is eternally valid. Rules which had led to their success will work for oneself and *vice versa*—hence the form and function of Eg. *Weisheitsbücher*, which are, in all cases, written by old or elderly officials or kings for the instruction of their sons. The consciousness of the experience and insight which age has brought is clearly stated in these texts (The Teachings of Kagemni, Gardiner, *JEA* 32 (1946),

> p. 71 ff.; Ptaḥḥotpe, Žabá, *Les Maximes de Ptaḥḥotep*, 17, 10-13; 18, 1-6 and Amenemope, Lange, *Das Weisheitsbuch des Amenemope*, I, 1-III, 7). In general de Buck, *Nieuw Theologisch Tijdschrift* 21 (1932), p. 322 ff.; Brunner, *Altägyptische Erziehung*, p. 116 ff.; Morenz *Ägyptische Religion*, Index, s.v. Maat.

As a result the ideal of the respectful and obedient son or junior was deeply rooted in Eg. society (cf. Ptaḥḥotpe, l.c.; Volten, *Merikarê*, 35 ;*Amenemope*, XI ff.). For similar, sometimes exaggerated, attitudes in Muslim Egypt cf. Lane, *MCME* pp. 56, 204, 211.

H.'s statement on Spartan habits is confirmed by X. (*Lac* X, 1-3), Plu. (*Inst Lac* 10 (*Mor* 237)) and Cic. (*Sen* 18, 63; cf. X., *Mem* III, 5, 15; Gell., II, 15). It is an aspect of the habit of obedience which was a major aim of the Spartan *ἀγωγή* (Ollier, *Le Mirage Spartiate*, I, p. 28 ff.; Marrou, *A History of Education in Antiquity*, p. 45; Tigerstedt, *The Legend of Sparta*, p. 74 ff.). Ar. (*Nu* 993) claims that it was generally part of the old *παίδευσις* in Athens.

τόδε μέντοι ἄλλο ... τὴν χεῖρα : Cf. I, 134, 1. This custom is frequently mentioned in Eg. texts (*Wb* III, pp. 231, 2-12; 367, 1-4; Žabá, *Les Maximes de Ptaḥḥotep*, 5, 11; 13, 9; Anthes, *Hatnub*, 49, 7; Blackman, *MES* p. 46, 161; *Urk* IV, 158, 16). Representations are, however, rare. To a Gk. such prostration before another man was not only regarded as degrading and ridiculous, but also as blasphemy (Isoc., *Pan* 151; X., *An* III, 2, 13); for *προσκύνησις* was a cult act in Greece (Horst, *Proskynein*; Schnabel, *Klio* 19 (1924), p. 113 ff.; Richards *CR* 48 (1934), p. 168 ff.). These attitudes are perfectly illustrated by the famous *προσκύνησις* episode in Bactria during Alexander's march E. in 327 B.C. (Arr., *An* IV, 10; 12, 3-5; Curt., VIII, 5, 5-21; Plu., *Alex* 54, 3-4).

81. ἐνδεδύκασι δὲ κιθῶνας λινέους περὶ τὰ σκέλεα θυσανωτούς : H. (II, 37, 3) speaks of linen as being absolutely essential for priests. In point of fact it was the material from which the vast majority of Eg. garments were made (cf. Lucas-Harris, *AEMI*^{4} p. 142). The word *καλάσιρις* has not been identified in Eg. texts in the sense of a garment. Since it is called a *κιθών* it must have been, or seemed to be, a garment resembling the Gk. tunic and thus covering most of the body as far as the neck. Such a garb does not correspond to the common image of Eg. dress but there are excellent reasons for believing that H. is correct :

1. Petrie discovered at Deshasheh a number of linen garments dating from the O.K. which could be described as *χιτῶνες* (*Deshasheh*, p. 31).
2. The figures in the tomb of Petosiris frequently wear tunics like those discovered by Petrie (Lefebvre, *Petosiris*, III, pl. VIII ff.).
3. Schiaparelli (*Relazione*, II, p. 93 ff., figs. 68-9) published a batch of similar garments dating from the N.K. one of which had *frills at the bottom.*
4. The Busiris Hydria (n. II, 45) depicts the discomfited Eg. priests as dressed in a garment very similar to a *χιτών* which is fringed with tassels about both arms and legs.

This evidence, derived from widely different periods, indicates that the Egs. used an item of clothing which could be described as a *χιτών* and that it might or might not have a frilled hem. H.'s insistence that they were all *περὶ τὰ σκέλεα θυσανωτούς* will either be the result of overschematization (Introduction, p. 149 ff.) or, possibly, the reflection of a widespread Eg. taste for such embellishments in his own time. Tassels are certainly common both in the N.K. (L*D* III, pl. 115-117, 233) and the Ptol. Period (ib., IV, pl. 9; Kamal, *CGC. Stèles Ptol. et Rom.*, pl. LXXIX ff.).

τοὺς καλέουσι καλασίρις : If this word is correctly recorded by H. it is probably to be connected with the warrior class called *Καλασίριες* (cf. H., II, 164). The word passed into Gk. usage (even *χιτών* is Semitic—cf. *LSJ* p. 1993,a, s.v. *χιτών*). Democr. Eph. used it of the gaily coloured *χιτών* of the Ionians and Persians (*FgrH* 267, F.1). In *IG* V, 1, 1390, 18 it is applied to the garment, clearly a *χιτών*, to be worn by the celebrants of the Mysteries of Andania.

ἐπὶ τούτοισι δὲ εἰρίνεα εἵματα λευκὰ ἐπαναβληδὸν φορέουσι : *εἷμα* commonly refers to outer garments in H. (*LSJ* p. 487,b, s.v. *εἷμα*) and is thought of as an *ἱμάτιον* i.e. a kind of shawl or cloak. Mantles or cloaks were certainly employed in Egypt (M.K.—Newberry, *El Bersheh*, I, pl. VII, XI-XIII, XIX; N.K. L*D* III, pl. 115, 118, 159, 174, 180, 189, 222). In the later periods they were commonly worn by women (Bonnet, *Die* *ägyptische Tracht*, p. 62 ff.). The statement that they were made of wool is, however, curious and seems inapplicable to the examples quoted above, since most of them are transparent. Wilkinson-Birch (*Manners and Customs*, II, p. 323) suggested that the garment in question was the "burnous" which they describe as "a woollen cloak, open in front and buttoned over the breast. It has a hood". They point to examples worn by Syrian captives (cf. Davies, *Rekh-mi-rē‘*, II, pl. XXII & XXIII). In fact we know of few specimens of woollen fabrics until very late (collected Lucas-Harris, *AEMI*⁴ p. 146 ff.; cf. Forbes, *Studies*, III, p. 4 ff.) and we are not even certain of the Eg. word for wool (*Wb* IV, p. 49, 2 has *s‘rt* N.K. "Wool? (as an article of trade)", though its Copt. derivative ⲥⲟⲣ̅ⲧ̅, ⲥⲁⲣ̅ⲧ̅ certainly has that meaning). Nevertheless, since the Egs. had very large flocks of sheep they probably used it on some scale (cf. D.S., I, 87, 2).

οὐ μέντοι ἔς γε τὰ ἱρὰ ἐσφέρεται εἰρίνεα : Direct confirmation is not forthcoming but probably correct; for Eg. priests in Hell. and Roman times at least were forbidden to wear wool (Plu., *DIO* 3 ff. (*Mor* 352); *BGU* V, p. 77) and cleanliness in respect of clothing, as in other matters, was demanded by the scrupulous Piankhi (*Urk* III, 8, 12). The taboo was based on the demand for ritual purity in the Eg. cult (nn. II, 37; Plu., l.c.) from which point of view white linen, unlike wool, had the advantage of being easy to clean and of being easily seen to be clean (cf. Erman-Ranke, *Ägypten*, p. 244).

οὐδὲ συγκαταθάπτεταί σφι : Woollen fabrics are found very rarely in graves but occasional examples are known from most periods (Lucas-Harris, op. cit., p. 146 ff.). The taboo is perhaps confirmed by the very curious body (a prince?) discovered in the Deir el Baḥari cache which was covered by a white sheep-skin (Maspero, *Les Momies Royales*, pp. 548 ff., 778). Might not the hostility of the persons responsible for his death have pursued him even beyond the grave and endeavoured to destroy him completely by making him ritually unclean? In such a state none could achieve the immortality for which all Egs. craved.

82. καὶ τάδε ἄλλα Αἰγυπτίοισί ... ὅτευ ἐστί : On some Eg. monuments the months are represented by the gods to whom they belong e.g. clepsydrae dating from the time of Amenḥotpe III to the Roman

Period (Borchardt, *Altägyptische Zeitmessung*, p. 6 ff.); the astronomical ceiling from the Ramesseum, the mortuary temple of Ramesses II (L*D* III, pl. 170-1; cf. Nelson et al., *Medinet Habu*, VI, pl. 476 with pref. X); the List of Months from Edfu (Brugsch, *Mon. de l'Égypte*, pl. IX, 1-6; pl. X, 7-12). The development of this relationship between the gods and the months took place in two stages. Originally they were the deities in whose honour the Festivals of the First Day of the Month were celebrated but subsequently they became the tutelary deities of each month, as the documents mentioned above clearly depict them. This system was not, however, universally accepted. We have, for instance, a Hell. list which represents the months under 12 separate forms of Taurt (Daressy, *RT* 34 (1912), p. 189 ff.).

καὶ ἡμέρη ... ὅτευ ἐστί : Brugsch (*Thes.*, p. 45 ff.) discussed Ptol. and Roman texts from Dendera and Edfu which list the thirty days of the month. Each of these days has a protecting deity whose festival is celebrated on the day in question, e.g. the First of the Month is the Thoth Festival, the Second of the Month is the Festival of Harendotes, the Third is the Day of Osiris, etc. Such a list, therefore, agrees well with H.'s statement that the days were associated with particular gods. Indeed, the gods did not only preside over the days and months but even over the hours (Bonnet, *RÄRG* p. 753 ff.).

καὶ τῇ ἕκαστος ἡμέρῃ ... ἔσται : Hemerology was certainly widely practised at all periods in Egypt. The factor determining the character of the day is pre-eminently mythological viz. its connection with some mythological event which was believed to have taken place in it and imparted its character to it for ever. Less important causes are the incidence of divine festivals and, apparently, climatic conditions. In Roman times hemerology in Egypt was given an astrological basis in such documents as P. Stobart (Griffith, *ZÄS* 38 (1900), p. 71 ff.; 39 (1901), p. 78 ff.) and P. Cairo 31, 222 (Hughes, *JNES* 10 (1951), p. 256 ff., pl. X). At this period the fame of the *Dies Aegyptiaci* was great even in Rome itself (Hopfner, *Fontes*, pp. 522 ff., 647). In general vide Dawson, *JEA* 12 (1926), p. 260 ff.; Bonnet, op. cit., p. 763 ff., Roeder, *Zauberei und Jenseitsglauben*, p. 126 ff.

καὶ τούτοισι τῶν Ἑλλήνων οἱ ἐν ποιήσι ... ἐχρήσαντο : This is chiefly aimed at Hes. who was for Heraclit. also the chief repository of hemerological lore in Greece (cf. Plu., *Cam* 19). *Op* 765-828 contains advice which is claimed to rest on no less an authority than Zeus himself. This system refers not to the days of the year, but to the days of the lunar month and is at first sight analogous to the Eg. Kahun list which is also based on the month (Griffith, *Kahun*, pl. XXV, no. XVII, 3; Text, p. 62). It is, however, most unlikely that the Gk. scheme derived from Egypt as H. implies. Not only is the Kahun papyrus based on the *civil* not the *lunar* month and therefore, not a suitable prototype for the Hes. system but by Hes.' time Eg. hemerology was no longer based on the month but the year. The most important objection, however, is the fact that the superstition that certain days are lucky and others unlucky is world-wide and in the light of that it seems far better to argue that it grew up on the soil of Greece simply through the observation of the phases of the moon, though later accretions, ultimately from Babylonian sources, can be detected (Nilsson, *GgrR* I, pp. 561, 624). H. has yet again fallen foul of *post hoc ergo propter hoc* (vide Introduction, p. 147 ff.).

τέρατά τε πλέω ... ἀνθρώποισι : A portent is a physical sign from the gods designed to guide, warn or encourage men. Such phenomena are not encountered very often in Eg. texts. We may point to the following examples :

I. The cries of new-born babies could be treated as portents (Schäfer, *ZÄS* 44 (1907-8), p. 132 ff.; Grapow, *Grundriß*, V, p. 500 ff.).

II. A celestial portent—an extremely rare phenomenon in Egypt—is mentioned *Urk* IV, 1238.

III. In the reign of Nebtawyrēʿ Montuḥotpe an expedition to the Hammamat area was visited by many wondrous omens (*bỉꜣyt*) (Couyat-Montet, *Les Inscriptions Hiéroglyphiques et Hiératiques du Ouâdi Hammâmât*, nos. 110 A-B, 191). 110 A-B tells how when the expedition sought a stone suitable for a royal sarcophagus-lid a pregnant gazelle pointed out a perfect piece by giving birth to her young upon it. 191 refers to the miraculous discovery of a well which saved the expedition from thirst.

In general vide Bonnet, *RÄRG* p. 542 ff.

γενομένου ... ἀποβήσεσϑαι : As yet no evidence has come to light of any such documents. Nevertheless, we may confidently assume that they existed; for not only is H.'s information in this section extremely good but Man. Hist. contains several entries which could well be excerpts from such works (vide *FgrH* 609, pp. 18, 20, 46). We can perhaps get some idea of what they were like from Babylonian Omen Books (Contenau, *La Divination chez les Assyriens et les Babyloniens*, p. 110 ff.), the nearest Eg. parallel to which are the Dream Books. The format of the latter does not, however, correspond to H.'s description; for they do not tell us that a particular dream has had a particular consequence in the past, but rather that a particular dream will have such and such a result in the future (Bonnet, *RÄRG* p. 835 ff.; Volten, *Traumdeutung*).

83. **ἀνϑρώπων μὲν οὐδενὶ ... τῶν δὲ ϑεῶν μετεξετέροισι** : i.e. in Egypt the only form of *μαντική* available was the divine oracle. There were no counterparts of Gk. *μαντεῖς* etc. Oracles do not become important, or even appear, in Egypt until the N.K., the first certain example being the oracular consultation responsible for the appointment of Nebwenenef as High Priest of Amūn in the reign of Ramesses II (Sethe, *ZÄS* 44 (1907-8), p. 30 ff.). From that point they loom ever larger in Eg. life until, with the growth of the Theocratic State and its ultimate triumph in the XXIst Dyn., the oracle of Amūn at Thebes became in a very real sense the ruler of a large part of Egypt. The priestly lords of U.E., the High Priests of Amūn, clearly felt that their authority needed the support of the god himself. It is he, for example, who makes the decision in political questions such as the recall of exiles. These political tendencies were carried to their logical conclusion in Ethiopia where the oracle of Amūn at Meroë decided when and where to go to war (H., II, 29, 7), while at Napata we find that it not only appointed the kings (*Urk* III, 81-100) but even decided when they should commit suicide to make way for younger men until Ergamenes put a stop to the practice (D.S., III, 6). It was not, however, only on political matters that the oracle was consulted. Indeed any difficulty, domestic as well as public, could be referred to it. Appointments to high office, above all that of High Priest of Amūn, were frequently settled by the gods (Meyer, *Gottesstaat*, *Militärherr-*

schaft und Ständewesen, p. 495 ff.) while their services were also in demand to solve legal problems, such as questions of inheritance, ownership of property and the responsibility for theft. This legal prominence may be the result of a decline of confidence in the civil courts. On the other hand, the courts themselves may well have committed to the care of the gods such matters as they felt to lie beyond their competence.

καὶ γὰρ Ἡρακλέος μαντήιον ... ἐν Βουτοῖ πόλι ἐστί : Herakles here probably = Onuris, Apollo = Ḥorus, Athene = Neith, Artemis = Bastet, Ares probably = Montju, Zeus = Amūn and Leto = Wadjet. With the exception of Amūn and Onuris (Bonnet, *RÄRG* p. 564) direct Eg. evidence of oracular activity on the part of these deities does not exist but H.'s tradition is perfectly acceptable :

1. Oracular capacities were not, as in Greece, related to the nature of the deity. The mechanics of Eg. oracles made it possible for any god to function in that way.

2. Černý ("Egyptian Oracles", ap Parker, *Saite Oracle Papyrus*, p. 43) points out that the frequent L.P. names formed on the model *Ḏd 'Imn ỉw·f ʿnḫ* ("Amūn says he will live") suggest that oracles were consulted at the birth of a child in order to discover what its fate would be. In the repertoire of such names (Ranke, *Die ägyptischen Personennamen*, I, pp. 409, 16-412, 9; II, p. 334, 7-20) we find examples including all the deities mentioned by H. with the possible exception of Athene-Neith (Onuris, I, p. 410, 4; Ḥorus, pp. 410, 2; 411, 12-18; Neith, p. 411, 6 possibly but reading uncertain; Bastet, p. 410, 7-10; Montju, p. 411, 2-4; Amūn, p. 409, 22-410, 2; Wadjet, II, p. 334, 9-10).

H.'s list is not, of course, exhaustive. The common people, who were disinclined to approach the mighty and aloof state gods, had their own minor oracular deities e.g. the workmen of Deir el Medineh on the W. Bank of the Nile opposite Thebes consulted the deified kings Aḥmose (Legrain, *ASAE* 16 (1916), p. 161 ff.) and Amenḥotpe (Černý, *BIFAO* 27 (1927), p. 159 ff.). Oracles of sacred animals are also frequently mentioned in Gk. documents (Apis, Plin., *HN* VIII, 185; Ael., *HA* XI, 10; falcon, D.S., I, 87; Ael., op. cit., XI, 39; crocodile, Ael., op. cit., VIII, 4; sheep, Plu., *De Prov Alex* 21—cf. Meyer, *ZÄS* 46 (1909), p. 135 ff.), though references in Eg. sources are few (for an oracle in connection with Buchis of Medamud cf. Drioton, *Rapport sur les Fouilles de Médamoud (1925). Les Inscriptions*, p. 44, no. 100; as yet unpublished documents from the sacred animal necropolis at Saqqara also refer to animal oracles). Such oracles were not apparently known to H. or he would have mentioned such a *θῶμα*, though a number of the deities whom he names (e.g. Ḥorus and Bastet) were closely associated with animal cults.

οὐ μέντοι αἵ γε μαντηίαι ... διάφοροί εἰσι : The standard oracular procedure was as follows. At certain times of the year (e.g. religious festivals) the cult image, concealed in a shrine, was carried from the temple on the divine bark by the *wʿb*-priests and shown to the people. On these occasions the faithful consulted the god by placing their questions before him in a number of ways :

1. He was approached orally and asked to give his approval to particular requests (Blackman, *JEA* 11 (1925), pl. XXXVIII; ib. 12 (1926), pl. XXXVI).
2. Two documents were placed before him and he accepted one of them (Peet, *JEA* 10 (1924), p. 120; Černý, *BIFAO* 35 (1935), p. 41 ff.; Str., XVII, 1, 43 (C814); cf. H., II, 57, 3 with n. ad loc.).

The deity registered his approval or disapproval by approaching or recoiling respectively (Černý, op. cit., p. 58). However, the elaborate nature of some of the recorded replies makes it highly likely that in some cases the motions of the cult statue were interpreted orally by an attendant priest. In the case of sacred animals the suppliant derived the required information by observing the animal's movements.

There are slight indications of other methods :

1. Oral communication by the god. In the XVIIIth Dyn. it was a voice proceeding from the temple which impelled Ḥatshepsūt to embark on her Punt expedition (*Urk* IV, 342 ~ *BAR* II, § 285). This is a very special case but leaves open the possibility that oracles could be delivered verbally.
2. It has been suggested (Legrain, *ASAE* 16 (1916), p. 165 ff.) that the divine bark became too heavy to move when it reached the person or document of which the deity approved.

3. The god is sometimes said "to be angry" (*ḥd̠n*; B.M. 10335 recto 5—Blackman, *JEA* 11 (1925), p. 251; Spiegelberg, *Correspondences du temps des rois-prêtres*, p. 71; Gardiner, *Eg. Hieratic Texts*, p. 10*, n. 16). This may mean that the litter on which the image was carried shook when the god disapproved.

4. Incubation. Most of the evidence is Hell. but there is proof of the practice at Deir el Medineh in the late N.K. (Bonnet, *RÄRG* p. 837).

Bibliography : Sourdille, *Hérodote et la Religion*, p. 253 ff.; Meyer, *Gottesstaat, Militärherrschaft und Ständewesen*, p. 495 ff.; Bonnet, *RÄRG* pp. 560 ff., 837 ff.; Roeder, *Kulte und Orakel im alten Ägypten*, p. 191 ff.; Černý, "Egyptian Oracles", ap Parker, *A Saite Oracle Papyrus from Thebes*, Ch. VI; Helck-Otto, *Kleines Wörterbuch*², p. 261 ff.

84. ἡ δὲ ἰητρικὴ ... νούσων : The fame of Eg. medicine was world-wide (*Od* IV, 228; H., III, 1, 129). Some support for specialization can be found in ancient documents, particularly the Stele of Iri (Junker, *ZÄS* 63 (1928), p. 53 ff.) where most of the specialists mentioned by H. occur.

ὀφθαλμῶν ἰητροί : *swnw ỉrty pr ʿꜣ* "The Eye Physician of the Palace" (Iri, 1.6). Jonckheere (*CdE* 26 (1951), p. 242 ff.) points out that most examples of this title belong to the O.K. and supplies further instances. Remedies for the eye are conspicuous in medical texts, as we should expect in such a country as Egypt (Grapow, *Grundriß*, V, p. 71 ff.). For the high esteem of Eg. eye-doctors cf. H., III, 1. On ophthalmology vide Watermann, *Sudhoffs Archiv für Gesch. der Medizin* 42 (1958), p. 117 ff.; Krause, *Bull. Inst. Hist. Med.*, 1933, 1, p. 258 ff.; Meyerhof, *Ciba Symposia*, 1940, 1, p. 305 ff.; Ghalioungui, *BIFAO* 62 (1964), p. 63 ff.; Dollfus, *BSFE* 49 (1967), p. 12 ff.

οἱ δὲ κεφαλῆς : According to Lefebvre (*La Médecine Égyptienne*, p. 45) there is no evidence for such a group but perhaps the existence of doctors with this bias may be inferred from the medical papyri which contain a whole series of remedies for the head (Grapow, op. cit., V, p. 59 ff.).

οἱ δὲ ὀδόντων : Cf. expressions like *ỉbḥy* "He of the Tooth" (Borchardt, *Denk. des alten Reiches*, I, p. 108, no. 1426) or *ỉrw ỉbḥ* "He who deals with Teeth" (Quibell, *Saqqara*, I, p. 22). For further refs. vide Jonckheere, *Les Médecins*, p. 125 ff. The Egs. do not appear to have been particularly good at this branch of medicine (cf. Ruffer, *Studies in the Palaeopathology of Egypt*, p. 268 ff.). Their dentistry was largely pharmacological and the few examples of surgery extant are not very impressive. A possible case of drilling teeth to remove pus is discussed by Hooton (*Harvard African Studies* 1 (1917), p. 29 ff.) while an example of retentive prosthesis by means of a golden wire is also known (Junker, *Gîza*, I, p. 256 ff., pl. XLc). In general Filce Leek, *JEA* 53 (1967), p. 51 ff.

οἱ δὲ τῶν κατὰ νηδύν : Eg. *swnw ẖt pr ʿȝ* "The Body Physician of the Palace" (Iri, l. 3). For discussion vide Jonckheere *CdE* 26 (1951), p. 258 ff. A series of remedies is quoted ap Grapow, op. cit., V, p. 145 ff.

οἱ δὲ τῶν ἀφανέων νούσων : There are at least two known titles which could cover the Gk.—ʿ *ḥmwt štȝt* "He who knows(?) of the Mysterious Things" (Quibell, l.c.). The Stele of Iri (l. 8) contains a similar title ʿ *mw m ẖnw nṯnṯt* "He who knows(?) the (hidden) water within the *nṯnṯt*". The word ʿ is not easy to translate. It normally means something like "interpreter" and consequently Jonckheere (op. cit., p. 243 ff.) is inclined to think that it refers to consultants of some sort who diagnosed these inner complaints.

We have, then, been able to substantiate H.'s statements in part but, as far as we are able to reconstruct the situation from positive evidence, rigid specialization is difficult to prove. There is indeed a number of factors which suggest that H. has gone too far :

(a) While specialist titles are found they are comparatively rare.
(b) The highly important Stele of Iri and a number of other documents show that Eg. physicians were perfectly capable of accumulating a wide range of medical offices and duties and so could hardly be called specialists.

Nevertheless, it must have been the case that, even if doctors were fairly general in their competence, some would have had a bias to one field or another. Indeed, the surviving medical literature is composed of excerpts from separate treatises on particular diseases for which the existence of specialists is a pre-requisite (cf. Dawson, *Magician and Leech*,

p. 83; Sigerist, *History of Medicine*, I, p. 300; for discussion of sources Grapow op. cit., II, p. 95 ff.). The simplest explanation of H.'s statement is to argue, with Grapow (op. cit., III, p. 97) and Lefebvre (op. cit., p. 20), that Eg. medicine showed a considerable degree of specialization but at the same time to insist that the Egs. were neither as rigorous nor as strict in such matters as H. would suggest. In all probability we have here to deal with another example of H.'s treating *trends* as hard and fast *rules* (for which vide Introduction, p. 149 ff.).

Bibliography : Junker, *ZÄS* 63 (1928), p. 53 ff.; Dawson, *Magician and Leech*, p. 83; Sigerist, *History of Medicine*, I, p. 319 ff.; Jonckheere, *CdE* 26 (1951), p. 237 ff.; id., *Les Médecins de l'Égypte Pharaonique*, passim; Lefebvre, *Médecine Égyptienne*, p. 20; Grapow, *Grundriß*, III, p. 86 ff.; Filce Leek, *JEA* 53 (1967), p. 51 ff.

85. ϑρῆνοι : It is important to notice that the custom described by H. is intended to apply to the time immediately following death (*λιποῦσαι τὸν νεκρόν*) and before carrying the body to the Embalming House (*ἐπεὰν δὲ ταῦτα ποιήσωσι, οὕτω ἐς τὴν ταρίχευσιν κομίζουσι*). It does not, therefore, refer to the funeral ceremonies proper, which are frequently represented in tomb paintings. Foucart (*MIFAO* 57(3) (1935), p. 7 ff.) points out that in fact seven stages can be distinguished in the obsequies from Eg. representations, of which that in question is only the first. Unfortunately it is almost never depicted. He was able to identify only two examples—that in the Tomb of Isesi of the O.K. at Saqqara (v. Bissing, *Denkmäler äg. Sculptur*, I, pl. 18B + text) and a relief from El Amarna representing Akhenaten, Nefertiti and their court mourning for the princess Meketaten (Bouriant-Jéquier-Legrain, *Monuments*, pl. VI-VII). The present writer doubts, however, whether the first example represents the rites under consideration (vide infra) and in any case this evidence is totally inadequate for purposes of cross-checking H.'s account. The most we can do is to try and verify individual items by comparison with representations of other stages in the obsequies.

τὸ ϑῆλυ γένος πᾶν ... ἑτέρωϑεν δὲ οἱ ἄνδρες : H. states that there is a difference between the custom for men and women in that the men stay in or near the house. The representation in the Tomb of Isesi shows men outside the house lamenting and women within. The peculiar circumstances of Isesi's death, which apparently took place outside the house, would be enough to explain this. The rites described by H., if they took place, probably took place after the body had been laid out in the house—and that is not depicted. The El Amarna pictures are more illuminating. On pl. VI the King and Queen are depicted inside the house lamenting the princess who lies prostrate on a couch. There are other people mourning in the chamber but the picture is too badly damaged to identify them. Pl. VII, however, is a doublet of Pl. VI and there one of the mourners is a man, the other a woman. Those outside the house are both men and women. Therefore, from these representations we cannot substantiate H.'s statement. There is, however, one pointer which does perhaps corroborate it. In modern Egypt there is a distinction between the rites performed by men and women during the obsequies though the evidence does not refer to this particular moment in them (Lüddeckens, *MDAI*(*K*) 11 (1943), p. 9).

κατ' ὧν ἐπλάσατο ... πηλῷ : As far as representations of Eg. funeral rites are concerned, it is impossible to be certain that any example depicts this rite since the dust is never shown and, therefore, the upraised hand may simply be striking the head. However, in cases where a figure is seated, crouched or prostrate and the hands are held above the head, it is more likely that this rite is in question. Examples occur both in the Isesi and the Amarna relief (Bouriant-Jéquier-Legrain, op. cit., pl. VI, top register, right, crouching figure; pl. VII, middle register, prostrate figure; cf. also Lüddeckens op. cit., pl. 17 top register, crouching figure; Davies, *Tomb of Nefer-ḥotep*, pl. XXI some of the mourners appear to be picking up mud).

However ambiguous the representations may be, this custom as a rite of mourning is confirmed for Egypt from literary texts (*D'Orbiney* 8, 7; *Lansing* 4, 4), but H.'s implication that it was confined to women is contradicted by this evidence (Goyon, *Rituels Funéraires de l'Ancienne Égypte*, p. 11).

Curiously enough H.'s statement is again true of modern Egypt where it is only the women who smear themselves with mud (Lüddeckens, op. cit., p. 15). On the whole it seems preferable not to place too much weight on the ancient Eg. evidence, since it is all much older than H.'s time, but rather to argue that in the 5th Century a general tendency to specialization by sex had already begun to assert itself in mortuary rituals.

τύπτονται : The age-old *Klagegestus* in Egypt which recurs again and again in mourning scenes. Almost everyone in the sculptures of Isesi and in the El Amarna example is performing the rite. Other instances are found in the tombs of Amenemḥēt (Davies-Gardiner, *The Tomb of Amenemhēt*, pl. XXIV) and Ramose (Wreszinski, *Atlas*, I, pl. 8) and could be multiplied indefinitely.

ὑπεζωμέναι : Examples of the practice of catching up the garments in a belt are almost impossible to find in Egypt since we can never be certain that the picture does not represent some current fashion in dress. Possible examples occur ap Davies, *Tomb of Nefer-ḥotep*, I, pl. XXII.

φαίνουσαι τοὺς μαζούς : In the Tomb of Isesi (l.c.) the women certainly have bare breasts but that simply reflects the dress fashions of the time. In the Amarna sculptures it is impossible to be sure whether the breasts are bare or not. Certain examples of the custom from a period when it was customary to clothe the bosom are quoted by Gardiner (*ZÄS* 47 (1910), p. 162; cf. Tomb of Ramose (l.c.); Tomb of Neferḥotep (l.c.)).

Bibliography : Foucart, *MIFAO* 57(3) (1935); Werbrouck, *Les Pleureuses dans l'Égypte Ancienne*; Lüddeckens, *MDAI(K)* 11 (1943), p. 1 ff.; Bleeker, *Numen* 5(1) (1958), p. 1 ff.; Goyon, *Rituels Funéraires de l'Ancienne Égypte*, p. 11 ff.

ἐπεὰν δὲ ταῦτα ... κομίζουσι : II, 85, 2-89 are entirely devoted to the *θῶμα* of *ταρίχευσις*. A representation of the body being carried to the embalmers' workshop will be found in the tomb of Pepiʿankh at Meir where it is described as *šms r wʿb(t) nt wt* "Escorting to the Workshop of the Embalmer" (Blackman, *RTM* V, pl. XLII).

The reason for the practice of mummification is not far to seek, viz. the perfectly natural desiccation and *ipso facto* preservation which took place in early times when corpses were simply buried in the hot, dry desert sand. This clearly convinced the Egs. that such preservation was absolutely necessary for a continued existence beyond the grave. When, however, burial practices became more elaborate, the body was not only removed from the preservative influence of the sand by the use of coffins or brick-lined tombs but also because, in view of the increasing danger to the corpse from tomb-robbers, burial chambers were excavated at increasingly greater depths which took them into the bed-rock itself.

Accidental exhumations must have made the consequences abundantly clear and so primitive attempts were made to counteract them by artificial means. As early as the IInd Dyn. the body was wrapped in bandages underneath which were placed gum-soaked linen pads moulded to the form of the corpse as accurately as possible so that it often bears an uncanny resemblance to the living person. Unfortunately, the effect of this method is quite the opposite of that intended but from these abortive beginnings a highly elaborate and generally effective technique was developed which from the XVIIIth Dyn. involved two basic processes :

(a) Removal of the perishable internal organs (e.g. brain and entrails).
(b) Desiccation of the body, extracting all moisture and thus making it impossible for destructive amoebic bacteria to live in the tissues.

The end result of this treatment was that the skin became tough but pliant and the body assumed the appearance of a skeleton covered with skin. This rather unsatisfactory state of affairs clearly troubled the Egs. a great deal and they subsequently adopted a number of practices to circumvent it—the employment of reserve heads, portrait-masks, anthropoid coffins and eventually the highly elaborate system of mud-packing in vogue during the XXIst Dyn. which saw the very highest Eg. achievements in the field of embalming. The lengths to which the Egs. were prepared to go to preserve the body are excellently illustrated in the case of Tutankhamūn where, in addition to mummification, we find sixteen layers of bandages, three coffins, one stone sarcophagus and four shrines. In general Engelbach-Derry, *ASAE* 41 (1942), p. 235 ff.; Forbes, *Studies*, III, p. 190 ff.; Lucas-Harris, *AEMI*[4] p. 270 ff.

86. **Εἰσὶ δὲ οἱ ἐπ' αὐτῷ τούτῳ ... τέχνην ἔχουσι ταύτην :** As far as the Eg. evidence goes the position is as follows. The embalmers were called *wt*(*w*) (*Wb* I, p. 379, 9-13) "bandagers". Blackman (*HERE* X, p. 301 ff.) suggests that they may have formed a guild even in the O.K. as they certainly did later. At all events, we do find titles such as *ỉmy-r wt*(*w*) "Overseer of Bandagers" (Blackman, *RTM* V, pl. XLII) and *sḥḏ wt*(*w*) "Inspector of Bandagers" (Blackman, op. cit., pl. XLIII). Their relationship to the deceased was modelled on that between Anubis, the inventor of embalming, and Osiris, the first to benefit from the invention. Each ritual was a re-enactment of the prototype, the deceased, as through-

out the cult, being regarded as Osiris while the *wt* could be addressed as Anubis, take his epithets and occasionally, from the N.K. onwards, even wear an Anubis-mask.

Apart from the *wt*(*w*), who were concerned with the mechanical processes of mummification, the Eg. texts also mention in the context of embalming and the funerary rites lector-priests, *ỉmy-ḫnt* priests and the *sḏȝwty* (?) *nṯr* "Treasurer of the God". According to D.S. (I, 91, 3) the embalmer's office was hereditary, a statement which appears to be true (cf. Revillout, *ZÄS* 17 (1879), p. 83 ff.).

In later times the embalmers lost a great deal of the respect which they enjoyed earlier, although the embalming requirements of the L.P. must have increased their numbers considerably. This is accompanied by a modification in their titles. At the head stands the *ḥry sštȝ* "Chief of Mysteries'' who corresponds to the Gk. *ἀρχενταφιαστής* and performed the function of director of the embalming ritual (cf. Spiegelberg, *ZÄS* 56 (1920), p. 7). His subordinates were comprehended under the general term *ḫryw ḥb*(*t*) "lector-priests" (Spiegelberg, *ZÄS* 53 (1917), p. 119; 56 (1920), p. 3 ff.). Sometimes the old predicate "Anubis as Ut" was given to them (Möller, *P. Rhind*, pl.. 5).

Gk. texts mention two kinds of embalmer, the *παρασχιστής* "incision-maker" and *ταριχευτής* "pickler", but the implied specialization of function has left no trace in Eg. sources, *wt* or *ḫry ḥb*(*t*) being the standard terms. The embalmers of the L.P. were not of priestly rank (Otto, *Priester und Tempel*, I, p. 105 ff.) and H. seems to have thought of them as tradesmen. The almost complete lack of reference to the religious aspects of the ceremony is surely significant.

A number of expressions existed for the place of embalmment —*wʿbt* "Pure Place" often qualified by the addition of *nt pr nfr* "of the Embalming House" (*Wb* I, p. 284, 1-7); *sḥ nṯr* "Divine Booth" (op. cit., III, p. 465, 1-4), a common epithet of Anubis being *ḫnty sḥ nṯr* "He who is before the Divine Booth" (cf. in general Grdseloff, *Das ägyptische Reinigungszelt*, p. 39 ff.; Altenmüller, *JEOL* 22 (1972), p. 307 ff.). This booth was probably in many cases a movable structure erected near the tomb for a particular burial (Dawson, *JEA* 13 (1927), p. 41) but evidence does exist of rather more permanent installations. Naville discovered what appeared to be the remains of an embalmer's workshop at Deir el Baḥari (Naville, *Deir el Bahari*, II, p. 6) whilst the remains of such a structure for animals came to light at Tuna el Gebel (Sabra, *CdE* 14 (1939), p. 93 ff.). Pictures of some of the processes of mummification carried on there will be found ap Dawson, op. cit., pl. XVI-XVIII.

δεικνύουσι τοῖσι κομίσασι ... μεμιμημένα : H. seems to think that the images in question depicted the methods which he subsequently describes. We certainly have many examples of shabti-figures which are mummiform and equipped with coffins (vide n. II, 78) but it is difficult to see how they could indicate any significant difference between various methods of treating the body. Such figures could, however, very easily illustrate different styles of bandaging, which was a highly developed craft, or indeed external make-up generally (e.g. coffins, masks etc.) and perhaps it is to this that H. is referring.

τοῦ οὐκ ὅσιον ... ὀνομάζειν : Osiris (Elliot Smith, *Egyptian Mummies*, p. 60). For reticence on religious matters vide n. II, 3.

τὴν μὲν σπουδαιοτάτην αὐτέων ... εὐτελεστάτην : H. informs us that there were three methods of embalming. This is yet another example of the orderly Gk. mind's imposing a rigid system where none appears to have existed. It must, however, be remembered that our evidence for the methods of mummification is not very rich. This passage and the closely related D.S., I, 91 are the major written sources (cf. Elliot Smith, op. cit., Ch. III, passim) though interesting supplementary information will be found in Porph. (*Abst* IV, 10) and Plu. (*Sept Sap Conv* 16 (*Mor* 159)). Eg. documents tell us little (Elliot Smith, op. cit., Ch. IV); for they concentrate on bandaging and the associated ritual acts and largely ignore the physical treatment of the body—a criticism which is also applicable to such pictorial representations as we possess. The most important source of information is the study of actual mummies, though only a small proportion of known specimens has been scientifically examined.

D.S. (I, 91, 2) informs us that the most expensive method cost a talent of silver, the second twenty minae, the third very much less again, though no actual sum is given. Detailed figures are not available from Eg. sources but some information can be culled from Gk. papyri. One example (Wessely, *Studien zur Pal. und Pap.*, XXII, no. 56) gives the price of mummification as 440 dr. 16 ob. (cf. Elliot Smith, op. cit., p. 64 ff.).

A talent does not seem excessive for the most elaborate method, especially if we include the entire expense of the funeral, but we have no means of controlling the statement.

πρῶτα μὲν ... ἐξάγοντες : This statement is accurate and the practice is standard from the XVIIIth Dyn. The body was first placed on an embalming table (for which vide Habachi, *MDAI*(*K*) 22 (1967), p. 42 ff.). A chisel was then passed into the left nostril puncturing the ethmoid bone, sometimes the sphenoid, and then a hooked rod (*σκολιῷ σιδήρῳ*) was used to cut the brain to pieces. These pieces were then removed by means of yet another rod with a spoon-shaped end (Zaki Iskander, *ASAE* 42 (1943), p. 245; Filce Leek, *JEA* 55 (1969), p. 112 ff.). Fragments of brain-matter are, however, sometimes left in the skull. Obviously this was a violent operation which often resulted in considerable damage to the face (Dawson, *JEA* 13 (1927), p. 42). For the instruments used in mummification vide Sudhoff, *Archiv für Gesch. der Medizin* 5 (1911), p. 161 ff.; Jonckheere, *Autour de l'Autopsie d'une Momie*, pp. 90 ff., 101 ff. However, even in the XVIIIth Dyn. the brain is not always removed, e.g. the mummy of Sitamūn, daughter of Aḥmose I (Engelbach-Derry, op. cit., p. 259). Further variations occur in the manner of extracting the brain; it could be taken out through the back of the head (e.g. Aḥmose) or by way of a trepanning orbit (Dawson, *Contributions to the History of Mummification*, p. 832 ff.). The cranial cavity was sometimes left empty but could be filled with a solid mass of resin, sawdust or other materials though normally resin-soaked linen was employed.

τὰ δὲ ἐγχέοντες φάρμακα : I have been unable to unearth any evidence of this practice. Might H. have had in mind some process whereby molten resin was introduced into the cranial cavity by way of packing (vide Dawson, *JEA* 11 (1925), p. 77; id.-Gray, *Catalogue of Egyptian Antiquities in the British Museum I. Mummies and Human Remains*, p. 27, 49)?

μετὰ δὲ λίθῳ Αἰθιοπικῷ ὀξέϊ : The expression should refer to obsidian which is not found in Egypt but was imported in ancient times from Abyssinia (Lucas-Harris, *AEMI*^{4} p. 416) but I know of no knives of this material which can be dated to the historic period, though examples of prehistoric date are exemplified. It is of course a sacred rite which is in question and religions are notoriously conservative in such matters. At all events, the use of obsidian in mummification is assured since it was employed in the XXIst Dyn. to make false eyes (Zaki Iskander, op. cit., p. 247). Flint knives are known in the historic period when they were used for such ritual acts as circumcision (Lucas-Harris, op. cit., p. 411; Harris, *Lexicographical Studies*, p. 139).

παρασχίσαντες ... πᾶσαν : D.S. (I, 91, 4) adds the important detail that it was on the left side that the embalming wound was made. In fact Dawson (*JEA* 13 (1927), p. 42) knew of only two examples where the incision was made on the right-hand side. The direction and precise position of the wound show some variation and are useful means of determining a mummy's date. Having made the incision, the embalmer would insert his hand and draw out the stomach and entrails. He would then puncture the diaphragm and empty the thoracic cavity, with the general exception of the heart and the kidneys. There are, however, many examples which have not been eviscerated even in the highest ranks of society. In one case, although most of the viscera are absent, there is no evidence of an embalming wound. In fact they have been removed *per anum* by means of a sharp instrument (Granville, *Essay on Egyptian Mummies*; Dawson *JEA* 11 (1925), p. 76 ff.). The specimen in question is dated to the Persian Period c. 500 B.C., consequently not far from H.'s time, and this method is likely to have been employed in other cases.

H. gives us no information on the question of what was done with the entrails. In fact they were usually treated with natron and placed in four jars called Canopic Jars each of which was presided over by one of the Sons of Ḥorus, Duamutef (for the stomach), Ḳebḥsenuf (the intestines), Ḥapy (the lungs) and Imsety (the liver). From the XXth Dyn. onwards the entrails were treated, wrapped in four bundles and put back into the body together with little figurines representing the four tutelary deities. Sometimes, however, the Canopic packages were simply placed between the legs (Dawson, *JEA* 13 (1927), p. 48). In both cases dummy Canopic Jars are found. With the XXVIth Dyn. genuine Canopics come back into use once more (Dawson, l.c.).

ἐκκαθήραντες δὲ ... τετριμμένοισι : According to Lucas-Harris (op.

cit., p. 301) there is no identifiable trace of any process of cleansing with palm-wine or spices.

οἴνῳ φοινικηίῳ : Cf. III, 20, 1. It was made by fermenting date-palm sap (Lucas-Harris, op. cit., p. 22 ff.).

θυμιήμασι : Strictly speaking the word *θυμίημα* denotes a fragrant substance used as incense. Here, however, it is clearly fragrant spices which are meant. Perhaps they were used as a deodorant.

ἔπειτα τὴν νηδὺν ... ὀπίσω : This stage presents a very real problem, since it is nowhere stated that the substances in question were removed after the natron treatment and yet they have never been found as packing in a surviving mummy. "Apart from the finding of what may have been cassia or cinnamon, no reference can be traced to the presence of spices in mummies" (Lucas-Harris, op. cit., p. 325). Nevertheless, since there is good evidence that spices were placed in the body at this stage in *ταρίχευσις* (Zaki Iskander, *ASAE* 53 (1956), p. 185; Iskander-Shaheen, *ASAE* 58 (1964), p. 197 ff.), we must assume that they were removed after the natron treatment. According to Lucas-Harris (op. cit., p. 301) such a practice would serve three functions :

(a) It would accelerate the process of dehydration.
(b) It would prevent the collapse of the body-wall.
(c) It would check the smell of putrefaction which the body would give off while drying in the natron.

σμύρνης : Myrrh is a fragrant gum-resin obtained in Somaliland and S. Arabia from various species of *Balsamodendron* and *Commiphora* (Hepper, *JEA* 55 (1969), p. 66 ff.). The Eg. word *ʿntyw* (*Wb* I, pp. 206, 7-14; 207, 1-3) certainly refers to this substance in some contexts but in all probability is a rather vague word denoting aromatic resins in general. The use of myrrh in mummies seems certain (Lucas-Harris, op. cit., p. 323).

κασίης : This and the closely related cinnamon are both derived from species of laurel native to India, Ceylon and China, cassia coming from the *Cinnamonum cassia.* It was well known to Gks. and Romans but we have no adequate evidence that it was employed in Pharaonic times for mummification, though certain analysts claim to have identified it (Lucas-Harris, op. cit., p. 308 ff.).

πλὴν λιβανωτοῦ: Frankincense is a fragrant gum-resin obtained from small trees of the genus *Boswellia* which are found chiefly in Somaliland and S. Arabia as well as from *Commiphora pedunculata* which grows in the E. Sudan and Abyssinia. Probably it is at the least included under the Eg. designation *snṯr* (*Wb* IV, pp. 180, 19-22; 181, 1-13). Material which may have been frankincense was found in the Tomb of Tutankhamūn (Lucas-Harris, op. cit., p. 92).

συρράπτουσι ὀπίσω : Since we have reason to believe that the Egs. packed the body twice and since it is unlikely that they would have gone to the trouble of sewing up the incision only to have to open it again, we may assume that H. has become slightly confused, mixed the two stages up and transposed the closing of the embalming wound to the earlier stage.

ταῦτα δὲ ... λίτρῳ : Before this was done the Egs. took precautions to prevent the nails falling off. The skin was cut round the finger-tips, drawn thimble-wise over the finger-tips and then tied down. In the case of Tutankhamūn golden finger stalls were found serving this same purpose. *Ταριχεύουσι* is the standard Gk. word for drying fish. H. means that *νεκροί* were dried in Egypt by being covered with dry natron (*λίτρῳ*) just as fish were dried in the Gk. world by being placed in dry salt. Such a process would result in the desiccation of the body by the process of osmosis (Lucas-Harris, op. cit., p. 281 ff.; Sandison, *JNES* 22 (1963), p. 259 ff.).

λίτρῳ : "Natron", "natural soda", a compound of sodium carbonate and sodium bicarbonate mixed with varying proportions of sodium sulphate and common salt. It is found plentifully in the Wadi Natrûn to the west of the apex of the Delta (Lucas, *JEA* 1 (1914), 119 ff.). It has not only often been found in connection with mummies (e.g. on refuse embalming material) but also in or on bodies (Lucas-Harris, op. cit.,

p. 278 ff.). It was regarded by the Egs. as the great purifying agent.

κρύψαντες ἡμέρας ἑβδομήκοντα : The verb points to the fact that the body was completely covered with the natron. That this process occupied 70 days is probably wrong, since Eg. sources (Elliot Smith, op. cit., p. 50 ff.; Griffith, *Cat. Dem. Pap. Ryl.*, III, p. 85, 1. 10) give that figure for the entire *ḳrst* or burial. See further Spiegelberg *OLZ* 26 (1923), 421-4; Lange-Neugebauer, *P. Carlsberg I*, p. 46 ff.; Kees, *Ägypten*, p. 97 with n. 5; Shore-Smith, *Acta Orientalia* 25 (1960), p. 290, n. 24; Dawson-Gray, *Catalogue of Egyptian Antiquities in the British Museum I. Mummies and Human Remains*, p. X.

πλεῦνας ... ταριχεύειν : This statement hints at the existence of a fixed body of rules governing the subject. We have, in fact, a section of an Embalming Ritual (Sauneron, *Le Rituel de l'Embaumement*, passim; sections tentatively translated ap Roeder, *Rel. Urk.*, p. 297 ff.) and there can be no doubt that the order and arrangement of the ceremonies were rigidly laid down in the sacred books. This fragmentary example contains a series of directions to the officiant on the acts to be performed, the use of unguents and the application of amulets and bandages as well as the prayers and incantations to be recited during each of these rituals. It will have been the lector-priest (vide supra, p. 355) who was responsible for this part of the process (cf. Elliot Smith, op. cit., p. 48). Beyond any doubt it was the necessity of performing these religious rites which made the process of mummification so long.

λούσαντες τὸν νεκρόν : For scientific evidence on this point vide Lucas-Harris, op. cit., p. 301 ff. In any case the rite becomes perfectly credible from a religious point of view when we consider Eg. notions on the question of lustration and Eg. sources are not lacking which connect embalming and washing (cf. *PT* 1122, 2043c; further refs. Blackman, *RT* 39 (1921), pp. 51, 53 ff.). It is clear that the rite had two basic functions. In the first case it magically restored the lost body fluids to the shrivelled corpse and in the second case, since the water was thought to possess life-giving properties, it revivified the deceased. For an exhaustive discussion of Eg. ideas on ritual lustration vide Blackman *ZÄS* 50 (1912), p.

69 ff.; *PSBA* 40 (1918), pp. 57 ff., 86 ff.; *JEA* 5 (1918), p. 117 ff.; *RT* 39 (1921), p. 44 ff.; *HERE* X, p. 476 ff.

After drying, the body cavities were stuffed, usually with resin-impregnated linen, but this is sometimes replaced in later times by sawdust (e.g. Ramesses V) or lichen (Ramesses IV). Then the embalming wound was closed. H.'s *συρράπτουσι ὀπίσω* does not refer to a standard practice, since mummies were only rarely sewn up (cf. Elliot Smith, op. cit., p. 100), one example being that of Siptaḥ where a piece of linen was used for that purpose. The practice in fact continued into the XXth Dyn. but was generally abandoned in the time of Ramesses IV, though occasional examples occur in the XXIst. Normally the lips of the incision were simply drawn together and covered with an inscribed plate of metal or beeswax (cf. Elliot Smith, op. cit., p. 152 ff.) which was kept in place by pouring molten resin over it. This plate often bears a picture of the Eye of Ḥorus, a powerful protective amulet.

According to D.S. (I, 91,6) the body was rubbed first with cedar oil and other precious ointments and then with myrrh, cinnamon and similar materials. His account is very muddled but according to Zaky Iskander (*ASAE* 53 (1956), p. 190 ff.) there is some evidence that such treatment did take place after *ταρίχευσις*, while Lucas-Harris (op. cit., p. 296) point out that oil-stained embalming material from many sources bears witness to the accuracy of the statement concerning anointing with oil.

The eyes were not removed but pressed down inside the orbits and covered with small pads of linen dipped in molten resin. Over this the eyelids were then drawn. In the XXIst Dyn. the eyeballs were covered with artificial eyes of obsidian, alabaster or some other material and in such cases the eyelids were left open. A further refinement common at the same time is that of packing the corpse beneath the skin with mud or sand so as to give the body as life-like an appearance as possible.

According to Zaky Iskander (*ASAE* 42 (1943), p. 247) the body was finally treated with molten resin which would have had the effect not only of strengthening it but also of closing the pores and preventing moisture from passing into the dried-out corpse. Sometimes it was then embellished with pigments and the deceased arrayed in all his jewellery.

κατειλίσσουσι ... κατατετμημένοισι : Generally the digits and limbs were bandaged separately and then the whole body bound up. During this process the corpse might be completely wrapped in one or several sheets or shrouds which are usually tied at head and foot and are met with successively as the mummy is unwrapped (Murray, *The Tomb of Two Brothers*, p. 54 ff. (M.K.); Petrie, *Qurneh*, p. 8 ff.; Mace-Elliot Smith, *ASAE* 7 (1906), p. 166 ff. with pls. IV-VI). The bandages are often covered with religious texts while amulets are not infrequently found in the wrappings as well as on the body itself. Furthermore, copies of funerary works such as the *BD* were often placed between the legs of the deceased and wrapped up with him (Elliot Smith, op. cit., p. 147 ff.). After the XXIst Dyn. the physical treatment of the body became more and more cursory while ever more attention was lavished upon the bandaging. We have some particularly fine specimens from the Ptol. and Roman Periods when elaborate cross-bandaging studded with metal-bosses was in vogue.

ὑποχρίοντες ... Αἰγύπτιοι : According to Harris (*Lexicographical Studies*, p. 158 ff.) *κόμμι* (Eg. *ḳmyt*, Copt. ⲕⲟⲙⲙⲉ (*Wb* V, p. 39, 3-14)) may be applied to true gums and to gum-resins. It is probable that H. is referring to the fact that, when the mummy had been prepared, anointed and wrapped, sometimes a liquid or semi-liquid resinous material was poured over it (Lucas-Harris, op. cit., p. 312 ff.). This would have the effect of sticking the bandages to the body and the various layers to each other. The application of some such material seems to be depicted ap Dawson, *JEA* 13 (1927), pl. XVIII.

ξύλινον τύπον ἀνθρωποειδέα : i.e. a wooden anthropoid coffin.

καὶ ... ἱστάντες ὀρθὸν πρὸς τοῖχον : *ἐν οἰκήματι θηκαίῳ* lit. "in a sepulchral chamber". Presumably H. is referring to the practice found from the N.K. onwards of using caves and old tombs as communal burial places ("mummy pits"). Budge wrote of these "I have seen such caves at Thebes, in which dried bodies and skulls and bones were heaped up along the sides nearly to the roofs. The pit and passages of a forsaken tomb were often made to accommodate hundreds of bodies. At Aswân we found many pits full of mummies, ... The absence of valuable funerary furniture and ornaments rendered such bodies of no account to the professional tomb-robber, and the inaccessible situation of the places where they were laid made it unlikely that they would be thrown out to make room for others, or be disturbed by any except the cemetery jackals and the wolf of the desert" (*The Mummy*^{2}, p. 419 ff.). The apparently related *οἰκήματα πολυτελῆ* of D.S. (I, 91, 7) are connected with quite different mortuary customs (cf. Burton, *Diodorus Siculus* : *Book I*, p. 271).

87. τοὺς δὲ τὰ μέσα : The method employed here appears to be similar to that employed in the case of the Apis Bulls (cf. Spiegelberg, *ZÄS* 56 (1920), p. 1 ff. particularly 27 ff.).

τοῦ ἀπὸ κεδροῦ ἀλείφατος γινομένου : Cf. in general Lucas, *JEA* 17 (1931), p. 13 ff. The classical *κέδρος* was almost certainly not our cedar but a variety of juniper. We should probably identify it with the Eg. *ʿš* (*Wb* I, p. 228, 1-6) which is mentioned as early as the First Intermediate Period in connection with mummification (Gardiner, *Admonitions*, p. 32 ff.). The latest reference in the context of mummification dates from the 1st Century A.D. (*PAmh* II, p. 150).

> "Herodotus states that the material was injected into the intestines, where it remained during the period that the body was in the natron bath, after which it was allowed to escape, carrying with it the inner parts and intestines in a liquid condition. That any such action could have been brought about by an oil like that now being considered (i.e. 'Volatile or Essential Oils') is impossible. It might, however, have been caused by the natural process of decomposition, acting during the time that the body was in the bath, aided possibly by the natron of the bath, if this could have gained access to the abdominal cavity, and might have been wrongly ascribed to the injection" (Lucas-Harris, op. cit., p. 15 ff.).

Such a method may have been employed on at least one of the mummies of the XIth Dyn. from Deir el Baḥari. Queen ʿAshayt's abdomen showed clear traces of resin which could be due to such a process (Engelbach-Derry, *ASAE* 41 (1942), p. 248). In fact, this method of treatment may be suspected in any cases where there is no abdominal incision and considerable proportions of the viscera still remain within the corpse. Dawson (*JEA* 13 (1927), p. 48) mentions two mummies of the L.P. where nothing but desiccation appears to have been employed and provides a good reason for the employment of the oil in this way when he suggests that the introduction of a corrosive or astringent fluid would have arrested decomposition until the body could be subjected to desiccation. Perhaps this means that the practitioners of this method were really only concerned with drying the body, without bothering about evisceration, and, since they had so many bodies to deal with, had to devise some method of keeping them reasonably wholesome until they could be treated.

οὔτε ἀναταμόντες αὐτὸν ... τὴν νηδύν : Both characteristics are shown by the Deir el Baḥari mummies (Engelbach-Derry, op. cit., p. 246 ff.). In this case the bodies had been preserved by desiccation after considerable decomposition had taken place.

οὐδὲν ἔτι πρηγματευϑέντες : Surely it was bandaged at the very least.

88. συρμαίῃ ... τὴν κοιλίην : The use of the word *συρμαίη* shows that H. thought in terms of the stomach's being cleansed of refuse. Lucas-Harris (*AEMI*⁴ p. 302) point out that plain water, if used in sufficient quantity, would have the desired effect. Surely the process is merely a variant of that described II, 87.

ταριχεύουσι τὰς ἑβδομήκοντα ἡμέρας : Vide supra, p. 361.

89. τὰς δὲ γυναῖκας : There was often a time lapse between death and mummification and many corpses underwent considerable decomposition before being treated in the M.K. (Engelbach-Derry, *ASAE* 41 (1942), p. 255), the N.K. (op. cit., p. 261) and the Ptol. Period (Elliot Smith, *Egyptian Mummies*, p. 125). There is, however, no significant variation in this respect between male and female (the preponderance of women in the Nubian sample discussed ap Wood Jones, *Report of the Archaeological Survey of Nubia (1907-8)*, II, p. 212 ff. is probably coincidental) and the most plausible explanation is that pressure of work often prevented the mummifiers from giving a body their immediate attention. This is not to say that the iniquities described by H. are a complete fabrication but the account smacks not a little of Gk. scandalmongering and has probably gained much in the telling.

Bibliography (Mummification) : Elliot Smith, *The Royal Mummies*; id.-Dawson, *Egyptian Mummies*; Budge, *The Mummy*², p. 203 ff.; Dawson, *JEA* 13 (1927), p. 40 ff.;

Engelbach-Derry, ib. 41 (1942), p. 233 ff.; Zaki Iskander, *ASAE* 42 (1943), p. 223 ff.; Jonckheere, *Autour de l'Autopsie d'une Momie*; Sauneron, *Rituel de l'Embaumement*; Bonnet, *RÄRG* p. 482 ff.; Forbes, *Studies*, III, p. 190 ff.; Zaki Iskander, *ASAE* 53 (1956), p. 167 ff.; Hermann, *RAC* IV, 798 ff.; Lucas-Harris, *AEMI*⁴ p. 270 ff.; Sandison, *JNES* 22 (1963), p. 259 ff.; Iskander-Shaheen, *ASAE* 58 (1964), p. 197 ff.; Habachi, *MDAI(K)* 22 (1967), p. 42 ff.; Dawson-Gray, *Cat.Eg.Ant.B.M.I. Mummies and Human Remains*; Filce Leek, *JEA* 55 (1969), p. 112 ff.; Helck-Otto, *Kleines Wörterbuch*², p. 233 ff.; Altenmüller, *JEOL* 22 (1972), p. 307 ff.; Goyon, *Rituels Funéraires de l'Ancienne Égypte.*

90. ὃς δ'ἂν ... ἁρπασθεὶς : There is some evidence in favour of this statement, but not much :

I. Griffith (*ZÄS* 46 (1909), p. 134) pointed out that death by the crocodile could be regarded in this light through its connection with the Nile (vide infra). It often in fact kills its prey by dragging it beneath the water and drowning it. He also finds in some composite mummies (i.e. mummies made up of parts of various bodies) the remains of crocodiles' meals.

II. Ael. (*NA* X, 21; cf. Max. Tyr., II, 5; J., *Ap* II, 7(86)) tells us that the citizens of Ombos rejoiced when their children were carried off by crocodiles. This does not prove that the victims received the apotheosis implied by *πλέον τι ἢ ἀνθρώπου νεκρόν* but it does suggest that they were regarded as exceptionally fortunate.

Evidence from Eg. documents contradicts H. (vide P. Westcar, Sethe, *Lesestücke*, p. 36; *Urk* I, 23; Man. Hist., *FgrH* 609, p. 28) but it is not enough to refute him. In all probability the notion of apotheosis was a local one and confined to those areas where the crocodile was held in high honour (Kees, *Griffith Studies*, p. 404). Ael. (l.c.) certainly regarded it in that light.

ἢ ὑπ'αὐτοῦ τοῦ ποταμοῦ φαίνηται τεθνεώς : Apotheosis by drowning was undoubtedly an Eg. idea (Griffith, op. cit., p. 132 ff.; Murray, *ZÄS* 51 (1914), p. 127 ff.; Spiegelberg, ib. 53 (1917), p. 124 ff.; Kees, op. cit., p. 402 ff.; Rowe, *ASAE* 40 (1940), pp. 1 ff., 291 ff.).

τούτους πᾶσα ἀνάγκη ... θάπτουσι : To my knowledge only one text speaks in detail of the drowning of a person and the rites which followed. In the Demotic First Story of the Setem Khaemwēse (Brunner-Traut, *Altägyptische Märchen*, p. 183) we are told that Neneferkaptaḥ became a "Praised Drowned One". We then hear of rich mortuary rites though they are no more than we should expect for any high-born Eg. H.'s tradition is, however, acceptable on general grounds. Apotheosis by drowning was an Eg. idea. Since the drowned person became a god, his body would be treated with all the reverence accorded to the ritual body of a god i.e. the divine statue. No profane hand would be allowed to touch him.

91. Ἑλληνικοῖσι δὲ νομαίοισι ... ἐπιτελέειν : The *νόμοι* of Chemmis excited H.'s interest because, unlike customs elsewhere in Egypt, they were very similar to those of the Gks. This raised them to the status of *θώματα* (Introduction, p. 141 ff.).

Χέμμις: Eg. *Ḫnt(y) Mnw*, *Ḫnm Mnw*, *Ḫn Mnw*; Copt. ϢΜΙΝ, ΧΜΙΝ; Arab. Akhmîm. Normally called *Πανὸς πόλις*/*Πανῶν πόλις* in later writers. Capital of the 9th Nome of U.E., not to be confused with the floating island of *Χέμμις*/*Χέμβις* in L.E. (Gauthier, *DG* IV, p. 177; Gardiner, *AEO* II, p. 40*; Montet, *DG* II, p. 108 ff.).

νομοῦ τοῦ Θηβαϊκοῦ : *Νόμος* not "nome" = Eg. *sp3t* etc. but more generally "district, administrative area" as often in H. (Powell, *Lexikon*, p. 233). Hence D.S.'s statement that *Χέμμις* lay *κατὰ τὴν Θηβαΐδα* is virtually, if not actually, synonymous (I, 18, 2).

Νέης πόλιος : Possibly a small Gk. settlement in U.E. on the site of the later Ptolemais Hermiou (mod. El Manshah) (Lloyd, *JHS* 89 (1969), p. 80).

Περσέος τοῦ Δανάης : Perseus had close affinities with Egypt through his connections with the Danaid Cycle (on which vide Introduction, p. 132). These were doubtless quite secondary but were probably responsible for such developments as the *Περσέος καλεομένη σκοπιή* (II, 15, 1 with n. ad loc.), the association of the Gorgon with Libya (Schol. Pi., *P* X, 47; A.R., IV, 1513 ff. with Schol. ad loc.; Ov., *Met* IV, 617 ff.; Serv. ad Verg., *Aen* VI, 289) and that of Andromeda with Ethiopia

(Apollod., II, 4, 3; Str., I, 2, 35 (C42); Schol. Pi., l.c.). From what follows it is clear that H., or his predecessor(s), had identified P. with an Eg. deity. All available evidence indicates that it was Ḥorus (Lloyd, op. cit., p. 81 ff.) or Min-Ḥor (Lindsay, *Men and Gods on the Roman Nile*, p. 340 ff.).

ἱρὸν τετράγωνον ... τοῦ Περσέος : The temples of Akhmîm were renowned in late antiquity and Arab times. Pococke claimed to have identified no fewer than three stone temples in the N. alone (*Travels in the East*, I, p. 77) but it is clear that in the Graeco-Roman Period there were two of outstanding size and splendour, one to the N.W. (apparently Ptol.), the other to the S.W. of the city (apparently Roman). Little of either has survived into the 20th Century (*PM* V, p. 20) though we do possess a detailed description of the latter by the Arab writer Ibn Jobair (Sauneron, *BIFAO* 51 (1952), p. 123 ff.). There is, in addition, a rock temple dedicated to Min nearby at El Salamuni. Where H.'s temple lay it is impossible to determine. Be that as it may, his account is of some interest because it shows clearly that he did not enter the temple proper. He gives a detailed description of its environs, its shape, palm trees, large stone monumental gates and the large statues of kings sitting against the wall but then dismisses the interior in one short sentence. All he can say is that it contains a shrine (*νηός*) in which the cult image (*ἄγαλμα*) is lodged. He tells us nothing of the colonnades, hypostyle courts and chambers which must have existed in a temple large enough to have great stone pylons and statues of Pharaoh. One surprising omission is the poles ornamented with streamers so characteristic of Eg. temples that they became the symbol for god (𓊹𓏤 *nṯr*).

οὗτοι οἱ Χεμμῖται : There is a distinct possibility that some, if not all, of these were *μιξέλληνες* descended from Gk. traders connected with Neapolis (Lloyd, op. cit., p. 84 ff.).

σανδάλιόν τε αὐτοῦ ... δίπηχυ : This must refer to P.'s flying shoes which, together with the wallet for carrying the Gorgon's head and the Cap of Darkness, he had obtained from Hermes. The sandal is prominent both on coins and in Nonn., the Hell. writer from Akhmîm (Wainwright, *JEA* 21 (1935), p. 155). There are at least two religious notions current in the area which present a parallel with the Persean *σανδάλιον* :

1. Antaeopolis, near Ak̲h̲mîm, whose name is written with a sandal in Eg. (*Ṯbw*), had a legend according to which Ḥorus had made himself a pair of sandals there from the hide of the defeated Seth (Lloyd, op. cit., p. 84). Since this triumph meant the firm re-establishment of Maʿat "Order", it might easily have given rise to the close connection between the sandals of Ḥorus and the prosperity of Egypt. Indeed, it may have been ritually re-enacted annually (*πολλάκις*) so that each year Ḥorus reappeared, defeated Seth, made his sandals and brought well-being. Certainly Antaeopolis is not Akhmîm but it lies next door and there is no reason why the myth and its cultic expression should not have travelled thither.

2. The idea that the feet of a god brought prosperity to the land on which they trod is common in Egypt and finds expression (e.g. at Coptos) in votive offerings which have footprints engraved upon them (Castiglione, *Mélanges Michalowski*, p. 41 ff.; id., *Act.Orient.Hung.* 20(2) (1967), p. 239 ff.).

Either of these notions, or a combination of both, may lie behind the tradition mentioned by H.

ποιεῦσι δὲ τάδε Ἑλληνικὰ τῷ Περσέϊ ... ἐπιτελέειν : These *ἀγῶνες* have often been claimed to be identical with the famous Climbing Ceremony of Akhmîm (e.g. Wiedemann, *Kommentar*, p. 370; Sourdille, *Hérodote et la Religion*, p. 210; Kolta, *Die Gleichsetzung*, p. 151 ff.). There is, however, not one item in the Eg. ceremony which bears any resemblance to Gk. athletic contests. Indeed, H.'s *ἀγῶνες* are Hellenic in every respect—in their intention (to celebrate a hero), their character (*ἀγῶνα γυμνικὸν ... διὰ πάσης ἀγωνίης ἔχοντα*) and in the prizes (*παρέχοντες ἄεθλα κτήνεα καὶ χλαίνας καὶ δέρματα*). How do we explain this curious state of affairs? Presumably the presence of a Gk. settlement at Neapolis and the resulting intermarriage with Eg. women had led to a considerable degree of cultural fusion. Similarities were observed between P. and the Eg. god Ḥorus and these, aided and abetted by mythological considerations both Gk. and Eg., led to identification. Gks. and *μιξέλληνες* may then have introduced *ἀγῶνες* in honour of P.-Ḥorus which were celebrated in close association with the cult of the native god (Lloyd, op. cit., p. 85 ff.). That this hypothesis is somewhat bold cannot be denied but, short of assuming that H. is hopelessly and irremediably confused, it is difficult to see how else to account for the evidence.

αὐτοῦ κελεύσαντος : An oracular response obtained from Ḥorus at Akhmîm? (on Eg. oracles vide n. II, 83).

Bibliography : Iconomopoulos, *REG* 2 (1889), p. 164 ff.; Wiedemann, *Kommentar*, p. 370; Sourdille, *Hérodote et la Religion*, p. 207 ff.; Maspero, *Histoire Ancienne*, III, p. 802; Gauthier, *Les Fêtes du Dieu Min*, p. 33 ff.; Wainwright, *JEA* 21 (1935), p. 154 ff.; Legrand, *Hérodote*, II, p. 123, n. 4; Sauneron, *RdE* 14 (1962), p. 53 ff.; Morenz, *FuF* 36 (1962), p. 307 ff.; id., *RdE* 15 (1963), p. 125 ff.; Lindsay, *Men and Gods on the Roman Nile*, p. 340 ff.; Castiglione, *Mélanges Michalowski*, p. 41 ff.; id., *Act.Orient.Hung.* 20(2) (1967), p. 239 ff.; Kolta, *Die Gleichsetzung*, p. 150 ff.; Lloyd, *JHS* 89 (1969), p. 79 ff.; van Rengen, *CdE* 46(1971), p. 136 ff.

92. οἱ κατύπερθε τῶν ἑλέων ... οἱ δὲ δὴ ἐν τοῖσι ἕλεσι κατοικήμενοι : Not, as we might expect, the division between U. and L.E. but that between *ἥ σπειρομένη Αἴγυπτος* and *τὰ ἕλη*. Since II, 14 informs us that parts of the Delta were "sown land", *τὰ ἕλη* must only form part of the Delta, beyond doubt the area along the north coast where marshes and lakes are frequently mentioned by the ancients (D.S., I, 31, 5; 34, 3 ff.; Str., XVII, 1, 15 (C800); 18 (C801); 20-21 (802-3); Ptol., *Geog* IV, 5, 44; Hierocles (*Synecdemos* 726) mentioned the *Helearchia* "Marsh Province" between the Sebennytic and Pineptimi mouths of the Nile as does Georgius Cyprius (*Descriptio Orbis Romani* 737)). For modern discussions of the distribution of marshland in Egypt vide Passarge, *Die Urlandschaft Ägyptens*, p. 113; Butzer, *Die Naturlandschaft Ägyptens*, pp. 71, 74, 76; id., *CAH* I, Ch. II, fasc. 33, p. 33. Marshes survived in the area into modern times (Ball, *Contributions*, p. 4).

τοῖσι μὲν αὐτοῖσι νόμοισι χρεῶνται ... οἱ ἄλλοι Αἰγύπτιοι : This statement would only hold true for those people living in urban settlements within or in proximity to the marsh district. There were, however, genuine marsh-dwellers living a distinctive life of their own which is vividly described in Hld. (*Aeth* I, 5 ff.). In tomb paintings they are usually represented as extremely uncouth and are, therefore, sharply distinguished from most other Egs. (Davies, *Tomb of Puyemrê*, I, pl. IX; II, p. 73 ff.; id., *Nakht*, pl. XXIV; Blackman, *RTM* I, pl. XXV; Klebs, *MR* pl. 66-7; Wreszinski, *Atlas*, I, pl. 2, 117, 343, et al.). Their way of life survived in the *Elearchia* until Roman times (Montet, *Everyday Life*, p. 126 ff.).

γυναικὶ μιῇ ἕκαστος ... συνοικέει : The last certain case of polygamy in Ancient Egypt occurs in the XXth Dyn. over 600 years before H.'s visit (Edgerton, *ZÄS* 64 (1929), p. 62) but there are possible references to the custom in Demotic texts (Amir, *BIFAO* 62 (1964), p. 103 ff.) and it is likely enough that D.S. is correct when he writes *Γαμοῦσι δὲ παρ' Αἰγυπτίοις οἱ μὲν ἱερεῖς μίαν, τῶν δ' ἄλλων ὅσας ἂν ἕκαστος προαιρῆται* (I, 80, 3). This does not contradict H. since practical considerations would have made most Egyptians choose monogamy, however many wives they might have had in theory.

Bibliography : Edgerton, *ZÄS* 63 (1929), p. 59 ff.; Erman-Grapow, *Ägypten*, p. 175 ff.; Kees, *Ägypten*, p. 76 ff.; Seidl, *Einführung in die ägyptische Rechtsgeschichte*, p. 55 ff.; Montet, *Everyday Life*, p. 54 ff.; Pestman, *Marriage and Matrimonial Property*; Amir, *BIFAO* 62 (1964), p. 103 ff.; Tanner, *Klio* 49 (1967), p. 21 ff.; Seidl, *Rechtsgeschichte der Saiten- und Perserzeit*^{2}, p. 72 ff.; Helck-Otto, *Kleines Wörterbuch*^{2}, p. 89 ff.

ἀτὰρ ... ἐξεύρηται : This method of making bread is meant to contrast with *ἀρτοφαγέουσι δὲ ἐκ τῶν ὀλυρέων ποιεῦντες* (II, 77, 4). Since it would be impossible to cultivate *ὄλυρα* in the marshes, the marsh-dwellers would have had to incur the expense of transportation if they had insisted on eating spelt loaves.

κρίνεα πολλά, τὰ Αἰγύπτιοι ... λωτόν : The word *λωτός* is of unknown origin—possibly a Semitic loan word (cf. Heb. לוט *Lôṭ* : *LXX* *στακτή* and in general Frisk, *Griechisches etymologisches Wörterbuch*, II, p. 153). The Egs. called the flower *sšn* (*Wb* III, pp. 485, 486, 1-14), the Copts ⲥⲁⲣⲡⲟⲧ (Crum, *CD* p. 356, b), not *λωτός* as H. suggests. This type of error is, however, common in Gk. writers (cf. D.S., I, 34, 10). The word can be applied to three types of *κρίνον*—*Nymphaea lotus* L., *Nymphaea caerulea* Savigny and *Nelumbo nucifera* Gaertn. In this case the description is not detailed enough for us to determine whether the first or the second is meant. The two are, however, botanically similar enough to cross and intermediate forms occur quite naturally. What H.

says applies in fact to both. The white lotus is now found only in the Delta while the blue lotus is extremely rare, though it does occur around Rosetta and Damietta (Keimer, *Egyptian Travel Magazine* 25 (Aug. 1956), p. 26).

ταῦτ' ἐπεὰν ... πυρί : Seeds of the *Nymphaea* have been used since Pharaonic times for making bread in Egypt (cf. Dsc., IV, 113; Thphr., *HP* IV, 8, 9; Plin., *HN* XIII, 107 ff.). The loaves were called "lily loaves" and even appear on the tables of Eg. kings during the XIXth Dyn. They are still eaten in Egypt and W. Africa and are very nutritious, containing starch, protein and oil, seeds of both white and blue lotus being so used. The fruits are treated in a manner virtually identical with that in H.'s description. They are laid in heaps, the soft parts decay and the seeds are then taken out. They are then washed, dried and ground up in hand mills (Spanton, *AE* 1917, p.4 ff.).

ἔστι δὲ καὶ ἡ ῥίζα ... μῆλον : No confirmation from Pharaonic sources but the practice is confirmed by later evidence. Arab writers inform us that the rhizomes of *Nymphaeaceae* were eaten in Egypt during times of famine and in the late 18th Century (Sonnini, *Travels in Upper and Lower Egypt*, p. 204 ff.) they were sold ready dressed at a very low price in the street of Rosetta where the lower classes ate them in large numbers. Keimer was told that the inhabitants of the Delta still do so when food is short (op. cit., p. 26). They are almost solid starch and are eaten boiled or roast like potatoes (Spanton, l.c.).

ἔστι δὲ καὶ ἄλλα κρίνεα ... ἐμφερέα : *Nelumbo nucifera* Gaertn., the Indian or Rose Lotus. Often called *κύαμος Αἰγύπτιος* in classical sources. Detailed account Thphr., *HP* IV, 8, 7 ff.; cf. Plin., *HN* XVIII, 122; Dsc., II, 106. Amusing description of a thicket of these plants Str., XVII, 1, 15 (C799 ff.). H. is the first to mention it in Egypt. Representations are not found until the Graeco-Roman Period but then become frequent until the Christian Period when they cease (e.g. L*D* IV, pl. 88, Temple of Esna, reign of M. Aurelius-Commodus). Schweinfurth (*Über Pflanzenreste aus altägyptischen Gräbern. Berichte d. deutsch. botan. Gesellsch.*, Berlin, 1884, p. 357 ff.) believed that the plant was introduced into Egypt by the Persians. Cf. in general Keimer, op. cit., pp. 21, 28.

ἐξ ὧν ὁ καρπὸς ... γίνεται : This clause poses the following problems :

1. The meaning of *ὁ καρπός*.
2. The meaning of *ἐν ἄλλῃ κάλυκι*.

1. In a botanical sense *καρπός* can mean two things :

   (a) *Seed* (X., *Oec* XVI, 12).
   (b) *Seed* + *seed-vessel* i.e. *fruit* in the generally accepted sense (Thphr., *HP* I, 2, 1).

   Since the *καρπός* is said to be *κηρίῳ σφηκῶν ἰδέαν ὁμοιότατον* (b) must be correct (vide infra, p. 374).

2. *κάλυξ* has caused great difficulty. Several explanations have been offered :

   (a) *Seed-vessel*, *husk*, *shell* or *pod* of the water-lily (*LSJ* p. 871, a, *κάλυξ*, 1).
   (b) *Calix* (Powell, *Lexicon*, p. 182, b; Godley, *Herodotus*, I, p. 377).
   (c) *Stalk* (Rawlinson, *Herodotus*, II, p. 150; Legrand, *Hérodote*, II, p. 125, n. 3 quoting Hsch., s.v. *κάλυξ*).

   (c) can be excluded for two reasons :

   1. Botanically it is extremely odd to speak of a fruit growing "in another stalk".
   2. *κάλυξ* = "stalk" is not only unexemplified but semantically implausible and the authority of Hsch. is not strong enough to oblige us to accept such a meaning.

We can, therefore, safely assume that the meaning of *κάλυξ* in our context is not "stalk". (a) must be incorrect because we have established that *καρπός* includes both seed *and* seed-vessel. We are, therefore, left with (b) and must assume that the word means "the cup", "calyx" or "flower" of the plant. We propose, therefore, to translate as follows :

> "There are other lilies, too, similar to roses. These also grow in the river and the fruit sprouts up from them in a separate flower which grows next

> door out of the root, an object (sc. the fruit) very similar in shape to the comb of wasps".

This translation does, however, present one problem. "In another flower" must imply that to H. there were two *κάλυκες* per plant, one forming the flower without a seed-vessel, presumably *τὸ κρίνον* properly speaking, and the other forming a flower with a seed-vessel. This is botanically incorrect, because *all κάλυκες* of the Rose Lotus contain seed-vessels but the mistake can easily be explained. If H., or his source, had seen a large batch of Rose Lotuses some would have been nearer dropping their leaves than others and their seed-vessels would have been visible while the flowers of others could easily have concealed their seed-vessels. In the confused tangle of a clump of these plants the observer might easily have thought that each lotus plant had two flowers, one *κρίνον* and one for the seed-vessel.

παραφυομένη ἐκ τῆς ῥίζης : Leaves and the flowers containing the seed-vessels are raised about a metre from the water on long, slender stalks (Keimer, op. cit., p. 27; Spanton, op. cit., p. 2).

κηρίῳ σφηκῶν ἰδέην ὁμοιότατον : "something very similar in shape to the comb of wasps". Precise observation. The seed-vessel is placed at the end of a stalk and looks very like the rose of a watering-can (Spanton, op. cit., p. 2). It has also been compared to a pepper-pot (Spanton, l.c.), a honeycomb (Keimer, op. cit., p. 27) and a poppy capsule (Ruffer, *MIE* 1 (1919), p. 70). This seed-vessel is called by classical authors *τὸ κιβώριον* (cf. D.S., I, 34; Ath., III, 72a). Photographs will be found ap Sculthorpe, *The Biology of Aquatic Vascular Plants*, pp. 276, fig. 9.8D; 314, fig. 9.22C & D.

ἐν τούτῳ τρωκτὰ ... συχνά : The seed-vessel has in its upper surface a number of cavities each of which contains seeds about the size of a small acorn (Spanton, l.c.). They are brown in colour and contain a good deal of albumen (Ruffer, op. cit., p. 70). "In order to isolate the seeds, the fruits were piled up in heaps, allowed to putrefy, and when the shell had rotted away, the capsules were peeled off in the river and the seeds removed, dried and pulverised. Bread was then made from the seeds"

(Ruffer, l.c.). Apart from the nuts we also have evidence that the root (*τὸ κολοκάσιον*) was eaten (Diph. ap Ath., III, 73a; D.S., I, 34).

Bibliography : Conard, "The Waterlilies : a Monograph of the Genus Nymphaea", *Publ. Carnegie Inst.* 5 (1905), p. 279 ff.; Sculthorpe, *The Biology of Aquatic Vascular Plants*, p. 505 ff.; Irvine-Trickett, *Kew Bull.* 3 (1953), p. 363 ff.

τὴν δὲ βύβλον : Papyrus (*Cyperus papyrus*), usually called *πάπυρος* in Gk.; Lat. *papyrum*; Eg. *mnḥ* (*Wb* II, p. 83, 8); *ṯwfy* (ib. V, p. 359, 6-10); *ḏt* (ib. V, p. 511, 6-9). A plant of the sedge variety which grows to a height of 7-10 ft. excluding the root and flower, it was once common in Egypt but is now extinct there and does not occur at all on the Nile in the wild state further north than Tropical Central Africa (Upper White Nile and westwards to L. Chad and the Niger). It was last recorded wild in Egypt at the beginning of the 19th Century.

Bibliography : Täckholm-Drar, *Flora of Egypt*, II, p. 104 ff.; Lucas-Harris, *AEMI*^{4} p. 137 ff. These two discussions are completely authoritative and contain exhaustive bibliography.

ἀνασπάσωσι : For the papyrus harvest at different periods vide Klebs, *AR* p. 100; id., *MR* p. 134; id., *NR* I, pp. 42, 191.

ἐκ τῶν ἑλέων : Papyrus grows in marshy places but not in fast running water (Ruffer, op. cit., p. 67).

τὰ μὲν ἄνω ... ἐς ἄλλο τι : The uses to which *τὰ ἄνω* could be put were legion. The umbels were much in evidence at feasts, festivals and funeral rites, while the upper stem served to make columns for building, boats, rope, sandals, mats, boxes, sails and, above all, paper (Täckholm-Drar, op. cit., II, p. 107 ff.; Lucas-Harris, l.c.).

τὸ δὲ κάτω : Cf. D.S., I, 80, 5-6. The bottom part of the stem was used both as a food and a medicine (Täckholm-Drar, op. cit., p. 104 ff.; cf. representation Steindorff, *Das Grab des Ti*, pl. 53-4; v. Bissing, *Die Mastaba des Gem-ni-kai*, I, pl. XXVI, 75 & 76). Often figures are represented carrying sticks of papyrus which look rather like asparagus the rounded ends of which prove that they came from the bottom of the stem (Keimer, *JSOR* 11 (1927), p. 142 ff.). Apart from the lower stem the rhizomes were also eaten, either raw, boiled or roasted (cf. Plin., *HN* XIII, 72; XV, 117; Thphr., *HP* IV, 8, 4; Dsc., I, 86). Papyrus rhizomes were actually discovered at Kom Aushim by Schweinfurt (Täckholm-Drar, op. cit., p. 106). According to Thph. (*HP* IV, 8, 12) *Cyperus esculentus* L. was also used as food.

οἱ δὲ ἂν ... τρώγουσι : By no means everyone ate the papyrus in this way. It could be eaten raw and then the juice was swallowed and the fibrous remains spat out (Ruffer, op. cit., p. 67).

οἱ δέ τινες ... σιτέονται : Cf. n. II, 77, 4. Pictorial evidence (vide supra, p. 370 ff.) shows them eating geese, fish and goats.

93. οἱ δὲ ἰχθύες οἱ ἀγελαῖοι : The distinction between *τὰ ἀγελαῖα ζῷα* and *τὰ μοναδικά* or *τὰ σποραδικὰ ζῷα* was a commonplace of 4th Century zoology (cf. Arist., *HA* I, 1 ff.—in particular *ἀγελαῖα ... καὶ τῶν πλωτῶν πολλὰ γένη τῶν ἰχθύων, οἷον οὓς καλοῦσι δρομάδας, θύννοι, πηλαμύδες, ἀμίαι*; id., *Pol* I, 8 (1256a) where the difference is ascribed to feeding habits; Pl., *Plt* 264d). H. clearly intends to suggest that there are other fish in Egypt which would be, in Arist.'s terminology, *μοναδικοί* but that his remarks are not meant to concern them e.g. *Labeo coubie* Rüpp. (Boulenger, *Zoology. The Fishes*, p. 170), *Barbus neglectus* Blgr. (op. cit., p. 251), *Synodontis clarias* L. & *batensoda* Rüpp. (op. cit., pp. 377, 380). Nile species which swim in shoals are *Alestes nurse* Rüpp. (op. cit., p. 122) and *Mugil cephalus* L. (op. cit., p. 429). It is, however, probable that the term *οἱ ἀγελαῖοι ἰχθύες* has a more limited significance here. The description which follows refers to the genus *Tilapia* (vide infra) and, therefore, in all probability, the genus is being regarded as *οἱ ἀγελαῖοι par excellence.*

ἐν μὲν τοῖσι ποταμοῖσι : That this phrase refers only to the Delta arms of the Nile in this context is indicated by two things :

(a) Ch. 92 and 94 refer to the marsh-dwellers. Therefore, it is probable that Ch. 93 does also.
(b) *ἐν τοῖσι ποταμοῖσι* occurs here in relation to *ἐν τῇσι λίμνῃσι.* The same is true of Ch. 94 where the geographical location is certain (*οἱ περὶ τὰ ἕλεα οἰκέοντες*).

οὐ μάλα γίνονται : Opinions differ on the translation of this expression :

(a) "... are not found in any numbers" (Rawlinson, *Herodotus*, II, p. 151).
(b) "... do not often come to birth" (Godley, *Herodotus*, I, p. 379).
(c) "... are hardly born" (Legrand, *Hérodote*, II, p. 126).

οὐ μάλα is an emphatic negative in H. and means "not at all" (Waddell, *Herodotus II*, p. 206; Powell, *Lexicon*, p. 213, a, *μάλα*, I). As for *γίνονται* the meaning "are born" is strongly suggested by the presence of *τρεφόμενοι* in the next clause. We should, therefore, translate "are not born at all".

ἐν τῇσι λίμνῃσι : In modern times there is a number of large lakes in northern Egypt—Maryut, Edku, Burullus and Menzala. It is not certain whether any of them existed in H.'s time but others certainly did; for he mentions the location of one northern lake near Buto (II, 156, 2). In Str.'s time Maryut certainly existed (XVII, 1, 7 (C793); 14 (C799); 21 (C803)). Ptol. also speaks of lakes in the vicinity of the mouths of the Nile (*Geog* IV, 5, 44) (cf. in general Ball, *Egypt in the Classical Geographers*, p. 22; id., *Contributions*, p. 4).

ἐπεάν σφεας ... ἐκπλέουσι ἐς θάλασσαν : Migration for the purpose of breeding is certainly found amongst Nile species. *Clupea finta* Cuv. ascends the Nile from the sea as far as the Fayyûm for breeding purposes (Boulenger, op. cit., p. 92) as does the mullet (op. cit., p. 429) and the *Morone*, the latter, however, rarely (op. cit., p. 447). The eel, *Anguilla vulgaris* Turt., is also migratory in the Nile (op. cit., p. 402). *Tilapia*, however, to whom most of what follows refers, never migrate to the sea. In fact all Cichlids, the family to which *Tilapia* belong, are fresh or brackish water fish (op. cit., p. 459).

ἡγέονται δὲ οἱ ἔρσενες ἀπορραίνοντες ... οἱ τρεφόμενοι ἰχθύες γίνονται : The breeding habits of *Tilapia nilotica* L. are the basis of this account. The process is as follows :

1. The male excavates a hollow in the bottom of a river or lake and entices the female to it by a fixed repertoire of movements.

2. The female lays there a batch of 20-60 eggs which are yellow in colour and about 2-3 mms. in size (*τῶν γὰρ ᾠῶν ἀπορραίνουσι ... κέγχρων*).

3. She then turns around and takes the eggs into her mouth (*οἱ δὲ ἔρσενες* (sic!) *καταπίνουσι*).

4. The male then brushes his genital papilla over the spot where the eggs are laid and emits a milky streak of *semen* (*ἀπορραίνοντες τοῦ θόρου*).

5. The female then turns around and takes this into her mouth also (*αἱ δὲ ... ἀνακάπτουσι*).

6. This process is repeated several times until all the batches of eggs are taken into the female's mouth (*κατ᾽ὀλίγους τῶν κέγχρων*).

7. The fertilized eggs remain in the female's mouth until they hatch out, a characteristic of Cichlids (Boulenger, op. cit., p. 459).

For a detailed discussion of the entire process cf. Boulenger, op. cit., p. 527 ff.; Dambach, *CdE* 41 (1966), p. 276. This peculiar method of breeding was certainly known to the ancient Egs. as is shown by a number of representations (Glanville, *JEA* 12 (1926), p. 75 ff.; Krönig, *MDAI(K)* 5 (1934), p. 144 ff.; Dambach, op. cit., p. 281 ff.).

H. or his source has made several mistakes :

(1) *Tilapia nilotica* is *not* migratory (vide supra).
(2) The alternation in leadership between male and female is probably a garbled account of the courtship ritual (Dambach, op. cit., p. 278). It will be observed that the initiative in the whole reproductive process is correctly given to the male.
(3) The male does not emit sperm until the female has laid the eggs.
(4) The section *οἱ δὲ ἔρσενες καταπίνουσι ... γίνονται* is quite wrong. It almost certainly arises from the fact that with *Tilapia* the young, even after birth, remain in the vicinity of the parent and in times of danger are re-admitted in to the mouth for protection (Gaillard, *MIFAO* 51 (1923), p. 87 referring to *Tilapia simonis* of L. Tiberias; Thompson, *JEA* 14 (1928), p. 25)—a phenomenon also observed with another Nile fish, *Haplochromis strigigena* Pfeff. (Boulenger, op. cit., p. 500).

The basic cause of these errors is the conviction that the reproductive process is analogous to that of humans. The male *semen* is taken into the female's body. She becomes pregnant as a consequence (*ἡγέονται δὲ οἱ ἔρσενες ... ἐξ αὐτοῦ κυίσκονται*). The young are then born viviparously (*τῶν γὰρ ᾠῶν ἀπορραίνουσι κατ' ὀλίγους τῶν κέγχρων ... εἰσὶ δὲ οἱ κέγχροι οὗτοι ἰχθύες* (cf. Dambach, op. cit., p. 279). To a native Eg. or Gk. the only possible interpretation of the young fishes' entering the mouth of the adult is that they are being eaten (Dambach, —a thing unthinkable in a female (cf. Cronos-Legend) hence *οἱ δὲ ἔρσενες καταπίνουσι*). It should, however, be borne in mind that in *T. galilaea* Art., an Eg. species, both male and female incubate the eggs and a species exists where only the male performs this function (Dambach, op. cit., p. 275). Finally, the only explanation for the existence of any *Tilapia* at all is that some had escaped the depredations of the males.

οἱ δ' ἂν αὐτῶν ... διὰ τὸν ῥόον : For a similar idea relating to tunny cf. Ael., *NA* IX, 42. The bruise mentioned on the *Tilapia nilotica* may have been suggested by the spot on the operculum of the species. This is, however, the same on both sides of the head (Boulenger, op. cit., p. 525; Gaillard, op. cit., p. 86).

ἐπεὰν δὲ πληθύεσθαι ἄρχηται ὁ Νεῖλος ... ἐκ τῶν ᾠῶν τούτων παραυτίκα γίνονται οἱ ἰχθύες : This explanation is, of course, quite untrue. Pools and mud-holes become filled with fish so quickly because the fish come along the canals which bring the first waters of the inundation (Sourdille, *La Durée*, p. 7). S. tried to use these lines to prove that H. had not visited Egypt at the beginning of the inundation, making two observations :

1. The Nile does not extend through filtration.
2. It is not those parts of the soil nearest the river which are covered first (so also Waddell, *Herodotus II*, p. 207).

These points are, however, invalid.

(1) Filtration made no substantial contribution to the spread of the inundation but it certainly existed. The level of the water-table is, in fact, intimately related to that of the river. Temple wells and lakes were filled by filtration water (cf. Rawlinson, *Herodotus*, II, p. 152, n. 5 quoting Gardiner Wilkinson; Willcocks, *Egyptian Irrigation*,

p. 26 ff.; Hume, *Geology of Egypt*, I, p. 117 ff.; Bonneau, *La Crue*, p. 63 ff.; Traunecker, *Kêmi* 20 (1970), p. 195 ff.). In any case, H.'s explanation could be a matter of inference. Autopsy need not have revealed that it was wrong; for H. may well have seen pools beyond the banks and simply *assumed* that they were caused by filtration, without looking particularly closely for another source such as canals.

(2) H. does not say *τὰ παρὰ τὸν ποταμόν* i.e. "the parts along the river bank" but *τὰ κοῖλα τῆς γῆς καὶ τὰ τέλματα τὰ παρὰ τὸν ποταμόν*. Surely this could easily mean "the hollows in the ground and the mud-pools which run parallel to the river" i.e. those lying beyond the raised banks of the river at a lower level and covered by water passing through gaps in the high banks before the latter were inundated (Rawlinson, l.c.; for the topography of the Nile Valley vide n. II, 97).

94. 'Αλείφατι δὲ χρέωνται ... τὸ καλεῦσι μὲν Αἰγύπτιοι κίκι : Eg. *kꜣkꜣ* (*Wb* V, p. 109, 2-7); Copt. ⲕⲓⲕⲓ, ⲕⲩⲕⲓ (Loret, *ASAE* 1 (1900), p. 58, no. 192); Ass. *kukkânîtum* (Delitzsch, *HWb* p. 327); Heb. קִיקָיוֹן *qîqāyôn*, later שֶׁמֶן קִיק *šĕmĕn qîq* (Brown-Driver-Briggs, *HEL* p. 884, b); Lat. *ricinus* (Lewis-Short, *LD* p. 1594). *Ricinus communis* L. "castor oil plant" (Keimer, *Gartenpflanzen*, p. 70 ff.; id., *Kêmi* 2 (1929), p. 103; Jonckheere, *Une Maladie Égyptienne*, p. 17, n. 2; Deines-Grapow, *Wörterbuch der ägyptischen Drogennamen*, p. 526 ff.; Lucas-Harris, *AEMI*^{4} p. 332). The Gk. *κίκι* (*κῖκι*) can be used in three senses : the shrub (Dsc., IV, 161; cf. Plin., *HN* XV, 25), the fruit (Str., XVII, 2, 5 (C824)) or the oil itself (H.; D.S., I, 34, 11; cf. Copt. ⲕⲓⲕⲓⲥ in this sense, Chassinat, *Un Papyrus Médical Copte*, p. 64). The word *dgm* (*Wb* V, p. 500, 9-14) is used of ricinus seeds and oil (Keimer, *Kêmi* 2 (1929), p. 103 ff.). Castor oil, under the names *κίκι* or *κροτών*, is often mentioned in Gk. papyri (e.g. Grenfell, *Revenue Laws of Ptolemy Philadelphus*, pp. XXXVI, 124, 126, 129, 135, 157; *PHib* I, p. 320 ff.).

οἱ περὶ τὰ ἕλεα οἰκέοντες : Cf. II, 92, 1. Str. (l.c.) confirms that the oil was used by the poorer elements. That its value was not great is clear from Gk. papyri (Schnebel, *Landwirtschaft im hellenistischen Ägypten*, I, p. 197 ff.).

παρὰ τὰ χείλεα τῶν τε ποταμῶν ... τὰ σιλλικύπρια ταῦτα : *Ricinus communis*, a shrub which in Egypt reaches a height of 3-5 m., occurs on no known Eg. representation. That its cultivation was extensive is, however, clear from Ptol. evidence. Mahaffy (*PPetr* II, p. 125, XXXIX, 2, 5, 9) estimated that about 14½ % of the farms discussed were planted with the crop. In Egypt today it is grown near houses and the same was probably true in antiquity. It also grows wild (Lucas-Harris, op. cit., p. 332). It is particularly common in U.E. (Keimer, *Gartenpflanzen*, p. 70 ff.).

τοῦτον ἐπεὰν συλλέξωνται ... ἀπιποῦσι : Plin. (l.c.) informs us that the seeds were sprinkled with salt before being pressed while Dsc. (l.c.) speaks of a mill in which the seeds were ground up. They were then placed in a basket and pressed to extract the oil.

οἱ δὲ ... τὸ ἀπορρέον ἀπ᾽αὐτοῦ συγκομίζονται : Plin. (l.c.; cf. Dsc., l.c.) excludes any such method for Egypt though he mentions it in Rome—"Coquitur id in aqua innatansque oleum tollitur".

ἔστι δὲ πῖον ... ὀδμὴν δὲ βαρέαν παρέχεται : The castor oil plant is frequently mentioned in medical papyri (Deines-Grapow, op. cit., p. 526 ff.) and is today largely used as a medicine. Str. (l.c.) mentions its employment as an anointing oil, a use to which it is put by modern Nubians. The latter also use it to dress hair (Lucas-Harris, l.c.). Its employment in lamps is confirmed by D.S. (l.c.), Str. (l.c.), Plin. (l.c.) and Eg. sources (*Wb* V, p. 500, 14). Keimer (op. cit., p. 119, n. 34) mentions that ricinus oil burns with a loud crackling noise. Other oils employed for lighting purposes were linseed oil (Lucas-Harris, op. cit., p. 333), probably sesame (op. cit., p. 336; *Wb* II, p. 302, 17-20) and olive oil (Montet, *Everyday Life*, p. 90).

τοῦ ἐλαίου : Eg. *ḏt* (*Wb* V, p. 618, 4-5); Copt. ϫⲟⲉⲓⲧ, ϫⲱⲓⲧ (Crum, *CD* p. 790 ff.); Heb. זַיִת *zăyîth* (Brown-Driver-Briggs, op. cit., p. 268, a-b). The word does not appear before the XIXth Dyn. (Keimer, op. cit., p. 143; id., *Kêmi* 2 (1929), p. 92) though a picture of an olive tree occurs in the XVIIIth (Frankfort, *Mural Painting of El-ʿAmarnah*, pl. IXc). The Eg. olive was less productive than the Gk. and its oil had a disagreeable smell (Thphr., *HP* IV, 2, 9; Str., XVII, 1, 35 (C809)).

It was never important (Kees, *Ägypten*, p. 51). In general Lucas-Harris, op. cit., p. 333 ff.

95. πρὸς δὲ τοὺς κώνωπας ἀφθόνους ἐόντας: *K.* = "gnat, mosquito" (*LSJ* p. 1019, a, s.v. *κώνωψ*). Winged insects are the scourge of Egypt where conditions are ideal for them since the heat causes organic material to decompose rapidly and it has large expanses of water (Lane, *MCME* pp. 3, 157 ff.; Sigerist, *History of Medicine*, I, p. 253; Riad, *La Médecine*, p. 235). In fact, the common Eg. mosquito, the culex, breeds in stagnant pools which abound in Egypt, The malarial *Anopheles*-mosquito occurs but is very rare (Hurst, *The Nile*, p. 181 ff.).

τοὺς μὲν τὰ ἄνω τῶν ἑλέων ... κοιμῶνται : In modern times many Egs. sleep on the house tops (Lane, op. cit., p. 158) and there can be little doubt that H. is referring to this custom. What, however, does he mean by *πύργοι*? Three possibilities suggest themselves :

(a) The roofs of some Eg. houses were equipped at the ends with extra elevations which probably contained roof rooms or loggias (Davies, *MMS* 1(2) (1929), p. 245 ff. with fig. 6; Ricke, *ZÄS* 93 (1966), p. 119 ff.). It is possible that these are H.'s *πύργοι*.

(b) There is evidence from the M.K., N.K. and Graeco-Roman Period of tall, tower-like houses both in town and countryside (Davies, op. cit., pp. 248 ff., 253 ff. with figs. 2, 12, 14). Like many other Eg. houses these had roof spaces where it would have been possible to sleep (Davies, op. cit., p. 249 ff.; Ricke, *Der Grundriß des Amarna-Wohnhauses*, p. 32; Montet, *Everyday Life*, p. 24 ff.; Ricke, op. cit., passim).

(c) On the Palestrina Nile Mosaic (Gullini, *I Mosaici di Palestrina*, pl. I) tall narrow towers occur in close proximity to other buildings, either narrowly separated from them or as part of the surrounding wall. The main buildings appear usually to be temples but those on pl. XV/XVIII and even more that on pl. XIX (bottom right) seem to be more secular.

Of the three something like (c) appears the most likely solution since the cast of H.'s Gk. suggests a construction which has some claim to independence while yet being inferior to a house.

τοῖσι δὲ περὶ τὰ ἕλεα ... ἄλλα μεμηχάνηται : Vide n. II, 92, 1. Eg. fishermen lived in small cabins of reeds (Bates, *Harvard African Studies* 1 (1917), p. 267) and would thus be deprived of the advantage of height.

πᾶς ἀνὴρ αὐτῶν ἀμφίβληστρον ἔκτηται : The Nile contained large quantities of fish which constituted an important source of food. There can be no doubt that the Delta was of prime importance as a fishing area. In the 19th Century the sea fisheries alone employed 3,700 men and 800 boats while Egypt's fresh-water fisheries employed over 6,000. Of the latter about 4,000 with 400 boats worked in L. Menzala alone (Bates, op. cit., p. 199 ff.). Thus a high proportion, if not all, of the marsh-dwellers will have plied this craft.

Almost every kind of net known in antiquity was used in Egypt (Radcliffe, *Fishing from the Earliest Times*, p. 316 ff.; Montet, *La Vie Privée*, p. 1 ff.)—hand nets (Bates, op. cit., p. 254; Klebs, *AR* I, p. 76; *MR* p. 101; *NR* I, p. 87), cast nets (Bates, op. cit., p. 255) and drag nets (op. cit., p. 258; cf. Klebs, *NR* I, p. 86). Other methods of fishing were, however, employed including harpoons and related weapons (Bates, op. cit., pp. 232 and 243; Radcliffe, op. cit., p. 307 ff.), hook and line (Bates, op. cit., p. 245; Radcliffe, op. cit., p. 312 ff.; cf. Klebs, *NR* I, p. 87) and the weel or wicker fish trap (Bates, op. cit., p. 249).

τῆς μὲν ἡμέρης ἰχθῦς ἀγρεύει : The nets were often also employed for catching wild fowl in which the marshes abounded (Bates, op. cit., p. 267).

τὴν δὲ νύκτα ... ὑπ'αὐτὸ κατεύδει : Radcliffe (op. cit., p. 335) denies that any fishing net could have had a mesh so small as to keep gnats out but several factors suggest that H. is right :

(a) In the tomb of Ḥetepḥeres, the mother of Khufu, a tent-like bed-canopy was discovered which might well have served, amongst other things, as a mosquito net (so Bratton, *A History of Egyptian Archaeology*, p. 120).

(b) Eg. cast nets and seines are often of considerable size (the former can have a circumference of 15 m. and the latter a length of 100 m.—Bates, l.c.) and the mesh is often small (modern cast net 1.5 cms., ancient seines $\frac{1}{8}$, $\frac{1}{2}$ and $\frac{3}{4}$ in. sq.—Bates, l.c.). Since the waters of

L.E. are in fact particularly suitable for seines, one can be confident that H. has these in mind. Such a large net, with such a small mesh, folded over on itself several times might not keep out the most determined gnat or mosquito but would certainly reduce their numbers to a more tolerable level.

(c) Such a detail concerning an area with which Gks. were well acquainted is not likely to be wrong.

οἱ δὲ κώνωπες ... πειρῶνται ἀρχήν : Paradoxography (Introduction, p. 145 ff.).

96. **τὰ δὲ δὴ πλοῖά ... φορτηγέουσι :** i.e. freighters. We are warned that the following description does not apply to every type of Eg. ship. The recently discovered Giza boats, for example, are very different in construction (Leclant, *Orientalia* 30 (1961), p. 106 ff.; Landström, *Ships of the Pharaohs*, p. 26 ff.).

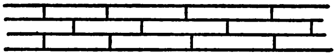
ἐκ τῆς ἀκάνθης : "acacia"; Eg. *šnḏt*; mod. *sŭnt* (*Wb* IV, p. 520, 9-13; 521, 1-15). Many species are found on the Nile (Jéquier knew seven, *BIFAO* 19 (1922), p. 31 ff.). Eg. texts often speak of it as a shipbuilding material (e.g. *Urk* I, 108, 4; *P. Harris* 11, 9; 12b, 12; 32b, 13; *P. Anastasi* IV, 7, 11; Pierret, *Insc.*, II, pp. 39-41)—again a *θῶμα* since, except for interior work, acacia was not used for ships in Greece (Torr (ed. Podlecki), *Ancient Ships*, p. 31 ff.). The sycamore fig was also used for this purpose (XVIIIth Dyn. *BAR* II, § 326; 251 B.C. Edgar, *PZenCol* II, no. 59270) as was ʿ*š*-wood imported from the Lebanon (Landström, op. cit., pp. 19, 23, 28, 35, 63, 89, 120 ff. in all of which read ʿ*š*-wood for cedar).

τῆς ἡ μορφὴ ... τῷ Κυρηναίῳ λωτῷ : Probably *Zizyphus lotus* (L.) Willd. which is widely current in N. Africa (Steier, *RE* XIII, 1515). In fact, the only resemblance between it and the acacia is the presence of thorns on both (Keimer, *Gartenpflanzen*, p. 64).

τὸ δὲ δάκρυον ... ἐστί : For Eg. references to the gum of the acacia (*ḳmyt nt šnḏt*) vide Wreszinski, *P. Ebers*, 54, 16; 77, 19. The best variety is obtained from *Acacia seyâl* Del. while that of the *sŭnt*, which is here in question, is not of particularly high quality. Today gum is obtained from various species of the tree (Lucas-Harris, *AEMI*⁴ p. 5).

ἐκ ταύτης ὦν ... ὅσον τε διπήχεα : Although the black wood of the *Acacia nilotica* has the advantage of being hard and unrottable, it is full of knots and difficult to work (Jéquier, op. cit., p. 31 ff.). Planks of any great length are impossible to obtain from it, a factor determining many of the peculiarities of shipbuilding on the Nile both in ancient and modern times, since no more suitable wood was available from Eg. sources.

πλινθηδόν : "after the fashion of bricks", i.e. the strakes were formed by laying short planks end-to-end such that the vertical joints broke bond, thus



Each strake was completely flush with those above and below, the result being a smooth surface i.e. the boats were carvel-built. The appearance of the shell of an Eg. boat with uneven horizontal lines delimiting the strakes is strikingly depicted in the tomb of Khnumḥotpe II at Beni Hasan (Newberry, *Beni Hasan*, I, pl. XXIX).

περὶ γόμφους ... ξύλα : The word *γόμφος* has caused some difficulty. *LSJ* (p. 356, b, s.v. *γόμφος* I, 1), on the basis of this one passage, translate "cross-ribs of Egyptian canoes (sic!)". This is most unlikely to be correct, since it would be an unnatural semantic development of the word's basic meaning "pin, dowel". In a shipbuilding context we should *expect* it to mean "pin" and close study of the evidence for Eg. shipbuilding techniques proves that this is exactly what it does mean. The Dashur boat described by Edgerton (*AJSL* 39 (1922), p. 126 ff.) is built of short planks fitted together in the following way. Mortices were sunk into planks of the strake already laid and into these blocks of wood or pins (*γόμφοι*) (called "dowel-tongues" by Edgerton) were driven. Similar mortices were then let into the bottom of the planks of the next strake and the planks hammered down upon or around the pegs already in the

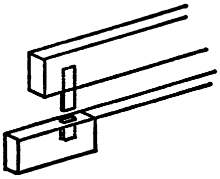


Fig. 1

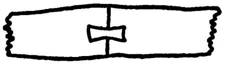


Fig. 2

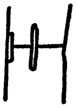


Fig. 3

strakes below (*περιείρουσι*; cf. Fig. 1). According to Edgerton's report the mortices designed to receive the *γόμφοι* were 3-5 in. deep, which means that the *γόμφοι* themselves would be 6-10 in. long. Probably by Gk. standards this would be abnormally long (*μακροί*). An additional reinforcement would be provided by means of dovetail joints on the inner surface of the strake, i.e. the surface not in contact with the water (Fig. 2; Fig. 3 shows a cross-section of strake, pin and dovetail). Such a device would obviously give much greater longitudinal strength. As with similar modern constructions, the walls of these ships were quite thick (Dashur 9 cms.). The process of boring the mortices and hammering planks into position is shown clearly on a relief from the tomb of Ti (Steindorff, *Das Grab des Ti*, pl. 119). Lashings were also employed on the Dashur boat in addition to dowel-tongues and dovetails to bind the gunwale to the top strake. By these means a shell is built up without any internal framework (*νομεῦσι δὲ οὐδὲν χρέωνται*) such as H. would expect from Gk. shipbuilding practice (Torr, op. cit., p. 39). Descriptions of modern practices very similar will be found ap Clarke, *AE* 1920, p. 6 ff. and particularly Hornell, *Water Transport*, p. 215 + pl. XXXV-XXXVI where the *πλινθηδόν*-construction is particularly clear in pl. XXXVb. Modern ships built in this way can reach a considerable size. Hornell mentions as the largest which he had encountered a vessel 61 ft. 9 in. long × 24 ft. broad whose hull-planking attained a thickness of 3 in. Its cargo carrying capacity was 45 tons and it boasted a crew of six (op. cit., p. 215).

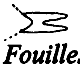
ζυγὰ ἐπιπολῆς τείνουσι αὐτῶν : *ζυγά* "benches". In fact, though they could serve as seats, the *ζ.* were basically lateral braces to prevent the shell from collapsing outwards. Larger ships (e.g. the obelisk barges of Ḥatshepsut) had as many as three superimposed rows of them. They normally passed straight through the hull wall and protruded a little on the outside. They also functioned as supports for deck-planking upon which the cargo was stored, the hull itself being too light in construction to bear the weight (Bell, *AE* 1933, p. 102). For examples of *ζυγά* on models vide Reisner, *CGC. Models of Ships and Boats*, 4798, 4799, 4800, 4801, 4882 etc.

ἔσωθεν ... τῇ βύβλῳ : There is no direct evidence known to me of this practice. The once common papyrus having now disappeared from the lower Nile, builders and sailors of the modern *naggr* employ pieces of clothing, sometimes torn off at moments of crisis *en voyage*, which they stuff between the strakes. Since fragments often poke straight through and flap about outside, these ships frequently have a decidedly inelegant air (Clarke, op. cit., p. 50; Hornell, op. cit., p. 218).

Here again H. finds a contrast with Gk. practice; for the Gks. caulked their ships by filling the seams (*ἁρμονίας*) with tow and other packing which was fixed by means of wax or tar (Torr op. cit., p. 34).

πηδάλιον δὲ ἓν ποιεῦνται : There is some variation (Edgerton, *AJSL* 43 (1926-7), p. 255 ff.) and examples occur with as many as five a side. Normally the steering-oars were fixed to the side of the ship and rested in a post fixed on the deck on which they were swivelled by means of a handle attached at right angles to the loom. Gk. ships—as H. undoubtedly bears in mind—almost always have two, one on either quarter (Torr, op. cit., p. 74).

καὶ τοῦτο ... διαβύνεται : H. is probably wrong when he says that the steering-oar was passed through the keel, since there is no satisfactory evidence for a true keel in Eg. shipbuilding. The evidence adduced by Boreux (*MIFAO* 50 (1925), p. 290 ff.) and Landström (*Ships of the Pharaohs*, p. 107) in favour of its existence is utterly unconvincing. Eg. steering-oars were normally attached to the side of the ship, but some examples do occur in which one single oar was placed in a notch directly on the centre line in the keel-plank, the substitute for a true keel, made up from the longest and stoutest available planks of acacia (Wreszinski, *Atlas*, I, pl. 42, row 3-4; Tylor-Griffith, *Paheri*, pl. III). One at least of the

Dashur boats had a slight protrusion at the poop which was slotted thus  and into which a steering-oar was obviously fixed (de Morgan, *Fouilles à Dahchour*, Mars-Juin 1894, p. 81 ff., fig. 203). It seems reasonable to suppose that H., or his source, had seen such cases, assumed the existence of a keel from Gk. practice and had made a natural slip in describing the steering-oar as "thrust through" it (*διαβύνεται*).

ἱστῷ ἀκανθίνῳ : O.K. masts were of the derrick or straddle type which was replaced after the VIth Dyn. by the pole type. Boreux (op. cit., p. 349 ff.) claimed that they could not always have been of acacia because they were frequently very long. Köster, however (*Das antike Seewesen*, p. 17), believed that, like the yards, they were built up of several pieces of acacia fished together. Nile-boats had their masts stepped well forward in the O.K. but they were gradually moved back until by c. 1500 they stood more or less amidships (Casson, *Ships and Seamanship*, p. 19 ff.). They were fixed into a mast-shoe probably fitted to the keel-plank and supported by a forestay running from the top to the prow and by two backstays running to the poop and usually fastened on the quarters. The masts could be unstepped and laid in a support constructed for the purpose and were always so treated when the ship travelled downstream (vide infra).

ἱστίοισι δὲ βυβλίνοισι : Note that ancient Eg. ships were square-rigged unlike their modern counterparts which carry lateens. Until the late N.K. the sail was always bent to a movable upper yard and tied at the foot to a fixed boom but from the early XXth Dyn. at the latest there appears a loose-footed sail bent to a fixed upper yard to which it could be brailed up by reefing/brailing ropes and by H.'s time this was clearly standard (n. II, 36, 4). Naturally the summary nature of Eg. representations makes it difficult to establish what the sails were made of but Boreux believed, probably rightly, that the material was normally linen, in smaller ships leather or papyrus (op. cit., p. 374 ff.). Sails could, in fact, easily be made out of matting woven from papyrus rind as are those used today on L. Titicaca (Hornell, op. cit., p. 227).

ταῦτα τὰ πλοῖα ... ὧδε : Well documented in Eg. sources :

(a) The hieroglyphic determinative for motion upstream is a ship under sail, while that for motion downstream has its sail stowed away and the mast laid in its rest (Gardiner, *Egyptian Grammar*³, Sign List, P1-2).

(b) Wooden tomb models of ships frequently occur in pairs, one under sail, the other with the mast unstepped (Reisner, op. cit., p. III).

λαμπρὸς ἄνεμος : The famous Etesian Winds (n. II, 20).

ἐκ γῆς δὲ παρέλκεται : Representations ap L*D* II, pl. 101b; Boreux, *MIFAO* 50 (1925), p. 427, fig. 182; Klebs, *NR* p. 206, fig. 129. The technique was still to be seen in the last century (Schlott, *Die Ausmaße Ägyptens*, p. 137, n. 1).

ἔστι ἐκ μυρίκης ... κατιθύνει τὸν πλόον : *Μυρίκη* = *Tamarix articulata* (Eg. *isr*—*Wb* I, p. 130, 1-6) which grows on the desert margins and, with the acacia and sycamore fig, was one of the commonest materials used by Eg. carpenters (Keimer, *Gartenpflanzen*, p. 55 ff.; Lucas-Harris, op. cit., p. 447 ff.). O.K. evidence of this sailing technique has recently been identified by Goyon on the Causeway of Unas at Saqqara (*BIFAO* 69 (1970), p. 25 ff.) and it is possible that it is also depicted on a Nagada II dish (Göttlicher-Werner, *Schiffsmodelle im alten Ägypten*, pl. IV, 2; Lloyd, *BiOr* 31 (1974), p. 78) as well as in Nubian rock drawings (Engelmayer, *Die Felsgravierungen im Distrikt Sayala-Nubien*, I, pl. II, 4; IV, 5; V, 6; XII, 4; XXI, 3-4). The function of the *θύρη* and the *λίθος τετρημένος* was elucidated long ago by Köster (*Klio Beiheft* 32 (1934), p. 11 ff.; cf. Landström, op. cit., p. 69) and its efficacy confirmed by recent experiments (Goyon, op. cit., p. 38 ff.). As H. himself indicates, the stone was intended to keep the ship from turning broadside-on (*κατιθύνει τὸν πλόον*) which a vessel simply drifting with the stream would have a tendency to do. As for the *θύρη* the upper-works of an Eg. ship would present a considerable bulk to the N. wind which had assisted it upstream and this would largely counteract the force of the current. The raft, however, being largely submerged, would present hardly any resistance to the wind and would consequently derive full benefit from the current, thus drawing the vessel along (for a Mesopotamian parallel vide Wilkinson-Birch, *Manners and Customs*, II, p. 210). G. identifies no archaeological evidence later than the O.K. but the Palestrina Mosaic (Gullini, *I Mosaici di Palestrina*, pl. XVIII) contains a striking parallel to the hooks on the prow of Unas' freighters which were probably used as attachments for the *θύρη*. In this context it is worth bearing in mind the problematic "anchors" which have been found on models (Reisner, op. cit., pl. XII; Schäfer, *Priestergräber*, p. 78) and representations (Holwerda-Boeser, *Beschreibung der äg. Sammlung Leiden. Denk. des alten Reiches*, pl. XX). Schäfer's example stood in no precise relationship to any part of the boat, that of Reisner was suspended by a line over the gunwale forward of the port beam while Holwerda-Boeser's case has the feature suspended over the poop. Furthermore, a picture at Deir el Gebrawi portrays a vessel which has a rope passing over the bow and disappearing into the water (Jéquier, *BIFAO* 19 (1922), p. 128 ff.). All this material has been interpreted as depicting or reflecting the use of anchors and this may well be correct (cf. Wilkinson-Birch, op. cit., II, p. 210) but the objects portrayed in Reisner, Schäfer and Holwerda-Boeser might also have served as H.'s *λίθος τετρημένος* whilst the Deir el Gebrawi scene could, in fact, be representing the rope attached to a *θύρη* which the artist has omitted to indicate since it lay virtually, if not actually, at the level of his water-line.

τὴν βᾶριν : Vide n. II, 60, 1.

Bibliography : Assmann, *Hermes* 31 (1896), p. 180 ff.; Reisner, *CGC. Models of Ships and Boats*; Assmann ap Borchardt, *Das Grabdenkmal des Königs Śaꜣḥu-reʿ*, II, p. 133 ff.; Clarke, *AE* 1920, pp. 2 ff., 40 ff.; Köster, *Das antike Seewesen*; Edgerton, *AJSL* 39 (1922), p. 109 ff.; Boreux, *MIFAO* 50 (1925); Montet, *La Vie Privée*, p. 327 ff.; Edgerton, *AJSL* 43 (1926-7), p. 255 ff.; Bell, *AE* 1933, p. 101 ff.; Köster, *Klio Beiheft* 32 (1934), p. 11 ff.; Faulkner, *JEA* 26 (1940), p. 3 ff.; Hornell, *Water Transport*; Digby ap Singer-Holmyard-Hall, *History of Technology*, I, pp. 730 ff., 741 ff.; Bowen, *The Mariner's Mirror* 46 (1960), p. 303 ff.; Nour-Iskander-Osman-Moustafa, *The Cheops Boats*, I; Bowen, *Antiquity* 34 (1960), p. 117 ff.; Leclant, *Orientalia* 30 (1961), p. 106 ff.; Torr (ed. Podlecki), *Ancient Ships*; Vandier, *Manuel*, V, p. 659 ff.; Landström, *Ships of the Pharaohs*; Goyon, *BIFAO* 69 (1970), p. 11 ff.; Casson, *Ships and Seamanship*, passim; Glanville-Faulkner, *Catalogue of Egyptian Antiquities in the British Museum. II. Wooden Model Boats*; Lloyd, *JEA* 58 (1972), p. 268 ff.; id., *BiOr* 31 (1974), p. 75 ff.

97. ἐπεὰν δὲ ἐπέλθῃ ... αἱ δὲ πόλιες μοῦναι ὑπερέχουσι : Cf. D.S., I, 36. The mounds on which Eg. settlements were built would always have been the highest land available. In the valley this was usually the land nearest the river or along old Nile beds where sedimentary activity had given rise to levées. In the Delta conditions were different and settlements were based on coarse sand "turtle-backs" which were never flooded. Such natural eminences, probably dyked where necessary to protect them from flooding, were in the course of time increased by the débris of millennia of settlement, forming *koms* and *tells* so that only in quite exceptional circumstances did they fail to rise above the flood waters (Butzer, *CAH* I, Ch. II, fasc. 33, p. 30 ff.).

H.'s picturesque description is corroborated by many later writers (Str., XVII, 1, 4 (C788 ff.); Willcocks, *Egyptian Irrigation*, p. 44; Lane, *MCME* p. 22; Palanque, *Le Nil*, p. 28; Winifred Blackman, *The Fellāḥīn of Upper Egypt*, p. 26; Bonneau, *La Crue*, p. 88 ff.; Hurst, *The Nile*, pp. 40, 313). The Arab writer Massoudi (ap Toussoun, *Histoire du Nil*, I, p. 19) has an equally felicitous description of Egypt at this season. "It is like a white pearl ... when, submerged by the river, it forms a vast sheet of whitish water above which the farms situated on the mounds and hillocks shine like stars". Nilotic landscapes at this season were a favourite subject of Graeco-Roman art (cf. the Praeneste Mosaic-Gullini, *I Mosaici di Palestrina*, pl. I ff. and in general Bonneau, op. cit., p. 89 ff.). The vivid descriptive power of this section suggested autopsy to Sourdille (*La Durée*, p. 8) but cf. Introduction, p. 70.

πορθμεύονται ὦν ... διὰ μέσου τοῦ πεδίου : Cf. Aristid., *Or* 36, 83; Philostr., *Im* I, 5; Procop. Gaz., *Ep* 136; Sen., *QN* IVa, 2, 11; Amm., XXII, 15, 12; Hurst, op. cit., p. 195; Bonneau, op. cit., p. 96 ff.

ἐς μέν γε Μέμφιν ... παρ'αὐτὰς τὰς πυραμίδας γίνεται ὁ πλόος : Petrie (*Naukratis*, I, pp. 2, 10) takes H. to imply that the ships followed a canal (presumably the El Libeine) past the pyramids. This suggestion is quite wrong; for H. is talking of the special conditions obtaining when the Nile was in flood. The average depth of the inundation was one to two metres and Eg. boats were specifically designed to draw very little water (Bonneau, op. cit., p. 97). They could have sailed past the pyramids even if no canal existed!

Κερκάσωρον πόλιν : Vide n. II, 17, 3.

Ναύκρατιν : Vide n. II, 178.

Κανώβου : Vide n. II, 15, 1.

Ἄνθυλλα : Cf. St. Byz., s.v. *Ἄνθυλλα*; Ath., I, 33 *Ἄντυλλα*; *PZenCol* IV, p. 11. Unidentified. Topographical data as follows :

(a) It lies between Canopus and Naucratis (H.).
(b) It lies between *Καλαμίνῃ* and *ἐν Μόριτι* on an itinerary from Alexandria (*PZenCol* l.c.). The site of both is unknown.

Cellarius (*Not.Orb.Ant.*, II, 2 (1706), p. 17) and Griffith (*Naukratis*, II, p. 83 ff.) identify the city with Gynaecopolis, the latter suggesting Denshal as the site, but in view of the totally inadequate data this must be regarded as little more than guesswork. Ath. (l.c.) states that Anthylla produced good wine (the Delta was a major centre of viticulture, vide n. II, 77, 4) and claims that it was girdles, not slippers, which the city provided to the Queen of Egypt.

Bibliography : Pietschmann, *RE* I, 2393: Calderini, *Dizionario dei Nomi Geographici*, I, 2, p. 44.

τὴν Ἀρχάνδρου καλευμένην : Cf. St. Byz., s.v. *Ἀρχανδρούπολις*; *Archa* ap *Geogr. Ravenna* III, 2. Identified with Tell Louqin which lies 32 kms. from Alexandria but on decidedly ethereal grounds :

(a) It lies between Canopus and Naucratis.
(b) In the 7th Nome there was a place called *Ḥwt smsw* (Montet, *DG* I, p. 71) lit. "House of the Elder" of which Archandropolis is claimed to be a possible translation. It is identified with the capital of the 7th Nome known in later times as *Μενέλαϊς* and placed on Tell Louqin (Daressy, *REgA* 2 (1929), p. 20 ff.; Gauthier, *MIE* 25 (1935), p. 43; id., *DG* VI, pp. 149, 151).

As for (a), there are many possible sites between Alexandria and Naucratis. (b), on the other hand, consists of a series of unwarranted assumptions and gets nowhere near being proof. We must resign ourselves to our ignorance of the exact site of this city.

Bibliography : Pietschmann, *RE* II, 437; Calderini, *Dizionario dei Nomi Geographici*, I,2 , p. 224.

98. **τουτέων δὲ ἡ μὲν Ἄνθυλλα ... τῇ γυναικί :** Cf. D.S., I, 52—a typical Persian institution (Olmstead, *A History of the Persian Empire*, p. 449). Pl. (*Alc I* 123b-c) has the following confirmatory passage ... *ἐπεί ποτ᾽ἐγὼ ἤκουσα ἀνδρὸς ἀξιοπίστου τῶν ἀναβεβηκότων παρὰ βασιλέα, ὃς ἔφη παρελθεῖν χώραν πάνυ πολλὴν καὶ ἀγαθήν, ἐγγὺς ἡμερησίαν ὁδὸν, ἣν καλεῖν τοὺς ἐπιχωρίους ζώνην τῆς βασιλέως γυναικός· εἶναι δὲ καὶ ἄλλην ἣν αὖ καλεῖσθαι καλύπτραν, καὶ ἄλλους πολλοὺς τόπους καλοὺς καὶ ἀγαθοὺς εἰς τὸν κόσμον ἐξῃρημένους τὸν τῆς γυναικός, καὶ ὀνόματα ἔχειν ἑκάστους τῶν τόπων ἀπὸ ἑκάστου τῶν κόσμων.*

In general terms there were two categories of taxes in the Persian Empire :

(a) Fixed taxation in money, each satrapy paying a clearly defined sum. Egypt with Cyrene, Barce and the adjoining Libyans paid 700 talents plus the yield of L. Moeris (H., II, 149; III, 91).

(b) Contributions in kind, especially for the army and the households of the Gt. King, satraps and sub-satraps. Egypt's prime obligation was corn for the garrison of Egypt (H., III, 91, 3). It is in this category that the *ὑποδήματα* etc. fall.

Bibliography : On Persian administration in Egypt vide Meyer, *Der Papyrusfund von Elephantine*, p. 23 ff.; Kienitz, *Die politische Geschichte*, p. 63 ff. In general Gray, *CAH* IV, p. 198 ff.; Andreades, *Gk. Public Finance*, p. 89 ff.

ἡ δὲ ἑτέρη πόλις ... οὐ μέντοι γε Αἰγύπτιον τὸ οὔνομα : Archander is closely associated in legend with his brother Architeles. They were Achaean heroes whose genealogies are somewhat confused :

(a) They were the sons of Acastus and with him drove Peleus from his kingdom (Schol. Townl. ad *Il* XXIV, 488; Schol. E., *Tr* 1128).

(b) They were the sons of Achaeus from Phthia (Paus., II, 6, 5; VII, 1, 6 ff.).

(c) They were sons of Phthius and grandsons of Achaeus (H.; cf. St. Byz., s.v. *Ἑλλάς*).

(b) and (c) are obviously variants of the same tradition. According to legend (Paus., l.c.) the two heroes went from Phthia to Argos where Danaus gave each of them one of his daughters. Afterwards they ruled in Argos and Lacedaemon and gave the inhabitants the name Achaeans. It must be this connection with Danaus and the Danaids which drew Archander into the orbit of Egypt (cf. n. II, 91).

Bibliography : Stoll ap Roscher, *ML* I, 473 ff.; Wernicke, *RE* II, 436 ff.; v. Geisau, *KP* I, 501.

ADDENDA ET CORRIGENDA

INTRODUCTION

p. 1 ff.See also Merrillees, "Aegean Bronze Age Relations with Egypt", *AJA* 76 (1972), p. 281 ff.; id. & Winter, "Bronze Age Trade between the Aegean and Egypt : Minoan and Mycenaean Pottery from Egypt in the Brooklyn Museum", *Misc. Wilbouriana* 1(1972), p. 101 ff.; Porada & Maier, "International Symposium on Cyprus", *Archaeology* 25 (1972), p. 298 ff.; Leclant, "Remarques préliminaires sur le Matériel Égyptien et Égyptisant recueilli à Chypre", *Praktika tou Protou Diethnous Kyprologikou Synhedriou,* I, Lefkosia, 1972, p. 81 ff.

p. 8, n. 32. For v. Gärtringen read v. Geisau.

p. 14 ff. On the rise of Psammetichus I see also de Meulenaere, "De Vestiging van de Saïtische Dynastie", *Orientalia Gandensia* 1 (1964), p. 95 ff.; id., "La Statue du Général Djed-ptah-iouf-ankh (Caire JE 36949)", *BIFAO* 63 (1965), p. 19 ff.

p. 24. On bronzes at Samos see now Jantzen, *Ägyptische und orientalische Bronzen aus dem Heraion von Samos. Samos,* VIII, Bonn, 1972.

p. 43. For "Pentacontaetia" read "Pentecontaetia".

p. 59, n. 242. See also Richter, "Der Zusammenhang zwischen ägyptischer und griechischer Kunst", *Das Altertum* 19 (1973), p. 74 ff.

p. 81 ff. There is much of value on this topic in Verdin, *De historisch-kritische Methode van Herodotus,* Brussels, 1971 and Fehling, *Die Quellenangaben bei Herodot,* Berlin-New York, 1971.

p. 97, n. 35. Add Kaplony, "Bemerkungen zum ägyptischen Königtum, vor allem in der Spätzeit", *CdE* 46 (1971), p. 250 ff.

p. 113, n. 111. Add Habachi & Ghalioungui, "The 'House of Life' of Bubastis", *CdE* 46 (1971), p. 59 ff.

p. 120 ff. On the whole question of the Greek concept of Egypt see Froidefond, *Le Mirage Égyptien dans la littérature Grecque d'Homère à Aristote,* Aix-en-Provence, 1971.

p. 130. For "Wassergrenz" read "Wassergrenze".

p. 140, *fin.* Read "the synthesis ..."

p. 141 ff. On *τὸ ἀξιόλογον* see also Drexler, *Herodot-Studien,* Hildesheim-New York, 1972, p. 3 ff.

p. 177 ff. On Herodotus' date for the Trojan War see also Huxley, "Thucydides and the Date of the Trojan War: a Note", *PP* 12 (1957), p. 209 ff.

COMMENTARY VOLUME I

Ch. 2. On milk and milk-products in Ancient Egypt see also Saffirio, *Aegyptus* 52 (1972), p. 44 ff.

Ch. 4. On the Sothic Cycle see also Long, *Orientalia* 43 (1974), p. 261 ff.

Ch. 8 etc. On H.'s measurements see also Oertel, *Herodots ägyptischer Logos und die Glaubwürdigkeit Herodots*, Bonn, 1970, p. 18 ff.

Ch. 14. On the inundation and its importance see Saffirio, op. cit., p. 20 ff.

Ch. 18. On Egyptian views of the extent of Egypt see also Schwab-Schlott, *MDAI(K)* 28 (1972), p. 109 ff.

Ch. 28 ff. On the Nile cataracts see also Vandersleyen, *BIFAO* 69 (1971), p. 253 ff.

Ch. 29. On Meroë and related subjects see now *Meroitica I. Sudan im Altertum*, Berlin, 1973.

Ch. 35. On Egyptian sanitary principles see now Dixon in Ucko, Tringham & Dimbleby *Man, Settlement and Urbanism*, London, 1972, p. 647 ff.

Ch. 37. On the priesthood see also Cenival, *Les Associations Religieuses en Égypte d'après les Documents Démotiques. Bibl. d'Étude 46. IFAO*, 1972; Moursi, *Die Hohenpriester des Sonnengottes von der Frühzeit Ägyptens bis zum Ende des Neuen Reiches. Münch. Äg. Studien 26*, Munich-Berlin, 1972; Sabourin, *Priesthood. A Comparative Study*, Leiden, 1973, p. 78 ff.; Helck, *Welt des Orients* 7 (1973),p. 1 ff.

Ch. 38. Add to bibliography Chassinat, *BIFAO* 4 (1905), p. 225 ff.

Ch. 42. On recent excavations at Siwa see Fakhry, *Beiträge zur ägyptischen Bauforschung und Altertumskunde* (*Ricke Festschrift*), 12, Wiesbaden, 1971, p. 17 ff.

Ch. 52. For some valuable comments on the influence of Herodotus' speculation about the origins of Greek Religion on later thought concerning the subject see Pohlenz, *Herodot. Der erste Geschichtschreiber des Abendlandes*, Leipzig-Berlin, 1937, p. 101.

Ch. 58. The Egyptian text of the inscription of Ptolemy VII will be found in Drioton, *ASAE* 44 (1944), p. 154.

Ch. 60. The religious importance of drunkenness is discussed by Brunner, *ZÄS* 79 (1954), p. 81 ff.

Ch. 62. On the *λυχνοκαῖη* see also Bakry, *Studi Class. Orient.* 19-20 (1970-1), p. 328 ff.

Ch. 65 ff. On animal cults see also Kákosy, *ZÄS* 96 (1970), p. 109 ff; id. 100 (1974), p. 76.

Ch. 70. Stereotyped scenes of gods spearing crocodiles occur in late temple reliefs (Chassinat, *Edfou*, III, pl. LXXVII, LXXXII; XIII, pl. DXXVIII-IX etc.) and on stelæ of Ḥorus-on-the-Crocodiles (Daressy, *CGC. Textes et Dessins Magiques*, pl. II-III).

Ch. 71. On hippopotamus-hunting see also Säve-Söderbergh, *MDAI(K)* 14 (1956), p. 175 ff.; Decker, *Die physische Leistung Pharaos*, Cologne, 1971, p. 39 ff.

Ch. 73. On fish cults see also Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, Wiesbaden, 1970. On sacred geese see Vandier, *Mon. Piot* 57 (1971), p. 5 ff.

Ch. 74. On the snake goddess Renenutet see Broekhuis, *De Godin Renenwetet*, Diss. Groningen, 1971.

Ch. 77. For bread see also Saffirio, op. cit., p. 48 ff. For Egyptian beer see also Helck, *Das Bier im alten Ägypten*, Berlin, 1971; Saffirio, op. cit., p. 48 ff. For wine see Saffirio, op. cit., p. 53 ff.

Ch. 81. For wool at El Amarna see Ryder, *Nature* 240 (1972), p. 355 ff.

Ch. 82. On hemerology see also Drenkhahn, *MDAI(K)* 28 (1972), p. 85 ff.

Ch. 84. On dentists see now Filce Leek, *Medical Hist.* 16 (1972), p. 404 ff. and on Egyptian medicine in general Kamal, *A Dictionary of Pharaonic Medicine*, Cairo, 1971 will be found useful. See also Leca, *La Médecine Égyptienne*, Paris, 1971.

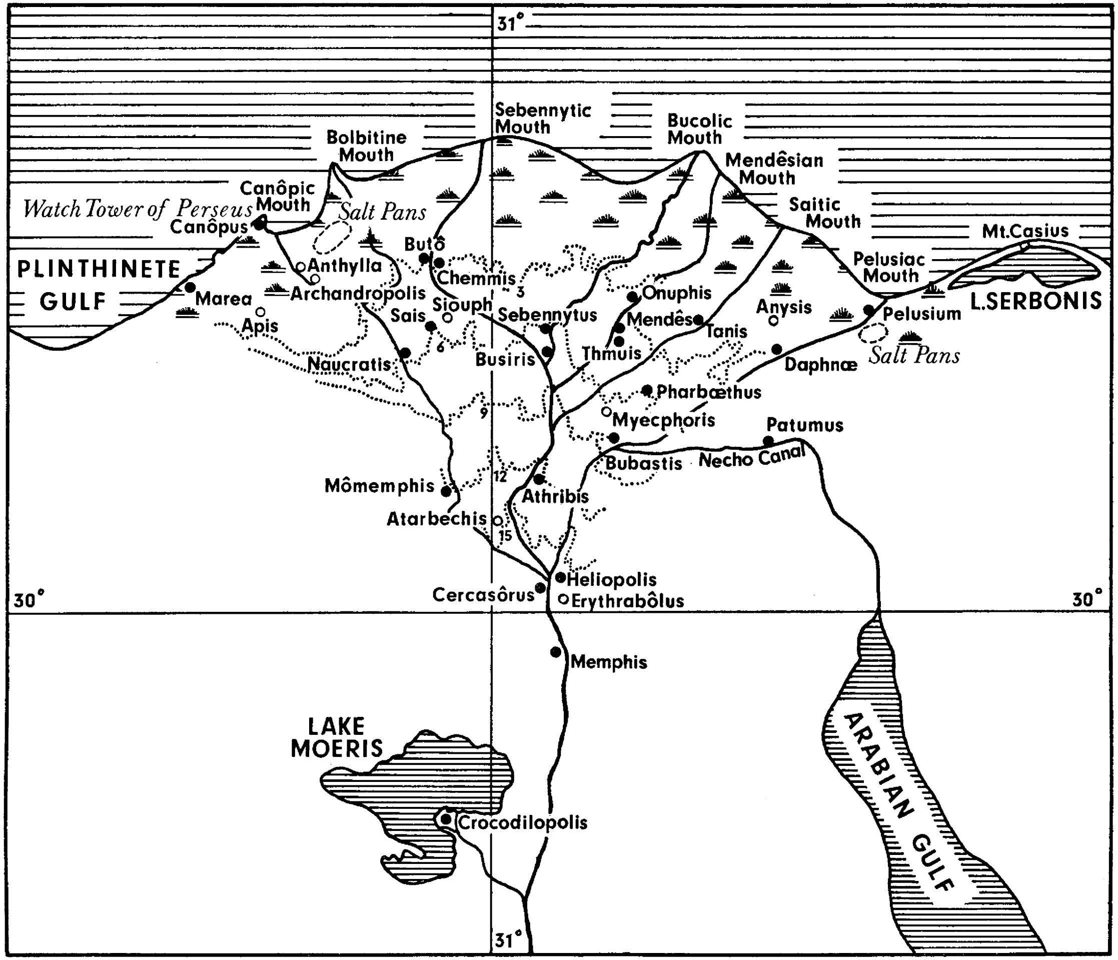
Ch. 91. See now Decker, *Die physische Leistung Pharaos*, p. 95 ff. and id., *CdE* 49 (1974), p. 31 ff.

Ch. 92. On marriage and concubinage see also Reiser, *Der königliche Harim im alten Ägypten und seine Verwaltung*, Diss. Vienna, 1972 and Simpson, *JEA* 60 (1974), p. 100 ff.

Ch. 94. On Egyptian oils see also Saffirio, op. cit., p. 47 ff.

Ch. 95. For a detailed discussion of Ḥetepḥeres' bed canopy and its function see Reisner-Stevenson Smith, *Giza*, II, Cambridge, Massachusetts, 1955, p. 23 ff. On the Egyptian fishing industry see also Aleem, *Proc. Royal Soc. Edinburgh* (*Sect. B*) 73 (1971-2), p. 333 ff. and Saffirio, op. cit., p. 55 ff.

Ch. 96. On the funerary bark of Khufu see also Abubakr & Mustafa, *Beiträge zur ägyptischen Bauforschung und Altertumskunde* (*Ricke Festschrift*), 12, p. 1 ff.


31°
Sebennytic Mouth
Bucolic Mouth
Bolbitine Mouth
Mendêsian Mouth
Canôpic Mouth
Saitic Mouth
Watch Tower of Perseus
Salt Pans
Canôpus
Mt.Casius
Butô
Pelusiac Mouth
PLINTHINETE GULF
Anthylla
Chemmis
3
Onuphis
Marea
Archandropolis
Anysis
L.SERBONIS
Apis
Sais
Siouph
Sebennytus
Mendês
Tanis
Pelusium
6
Salt Pans
Naucratis
Busiris
Thmuis
Daphnæ
Pharbæthus
9
Myecphoris
Patumus
Bubastis
Necho Canal
12
Mômemphis
Athribis
Atarbechis
15
Heliopolis
Cercasôrus
Erythrabôlus
30°
30°
Memphis
LAKE MOERIS
ARABIAN GULF
Crocodilopolis
31°

Herodotus' Στόματα as reconstructed by Ball. Black dots indicate sites whose identification is, in B. 's opinion, "tolerably certain". Circles indicate conjectures. Dotted lines running across the Delta correspond to present ground-contours 3, 6, 9, 12 and 15 metres above sea-level.